

PUBLIC
ADVISORY COMMITTEE
ON THE
ENVIRONMENT

**PROCEEDINGS
of the
1981 ANNUAL JOINT MEETING
with the
ENVIRONMENT COUNCIL OF ALBERTA**

DECEMBER 4, 5, 6, 1981

GRANDE PRAIRIE, ALBERTA

**REPORT AND RECOMMENDATIONS
TO THE**

Alberta
ENVIRONMENT COUNCIL OF ALBERTA



**PROCEEDINGS OF THE ANNUAL JOINT MEETING
OF THE
PUBLIC ADVISORY COMMITTEE ON THE ENVIRONMENT
AND THE
ENVIRONMENT COUNCIL OF ALBERTA**

**4, 5, 6 DECEMBER 1981
GRANDE PRAIRIE, ALBERTA**

Copies of this
report may be obtained
upon request to

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Edmonton, Alberta
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PROCEEDINGS



1 MORNING SESSION - 8:30 A.M.

2 CHAIRMAN - MRS. BETTY HUNTER.

3 -----
4 MRS. BETTY HUNTER: Good morning, ladies and gentlemen
5 and guests. We are so glad to have you here with us this
6 morning. Personally, I'm so glad to see so many PAC members
7 here. I've been asked to announce that for those of you of
8 our guests who would like luncheon tickets, they may be had
9 at the desk here at the side.

10 We as a group, I'm sure, are very glad to be in
11 Grande Prairie. I am personally very glad to come back to
12 the Peace River country; I was here 47 years ago for the first
13 time in a country school.

14 I am going to first of all call on PAC Chairman
15 Dr. Martha Kostuch. Martha?

16 DR. M. KOSTUCH: I am going to pronounce my name to
17 start with and hopefully it will be pronounced right then;
18 it's Kostuch, it's only been a year that I have been
19 chairman. I hope that the guests are also ladies and
20 gentlemen, but other than that, I see some of the guests
21 looking as if maybe they aren't considered ladies and
22 gentlemen.

23 I would like to welcome you all here, welcome the
24 Public Advisory Committee, the Science Advisory Committee,
25 the Environmental Education Advisory Committee, and the ECA.
26 This is the one opportunity during the year that I have to
27 exchange thoughts. The formal part of the meeting is very



1 important, and we have got an excellent program before us.
2 But I think the informal part of the program and the chance
3 to talk to each other and discuss issues and look forward to
4 what is going on in the future is as essential as the formal
5 part of the meeting.

6 We are facing some important issues in the future.
7 Certainly interbasin transfer was in the forefront, and that
8 is certainly an issue that PAC has to consider, and the ECA,
9 and look at and take some action and some stands on, whether
10 it's for or against; we certainly can't ignore it. Air
11 pollution is an issue of concern to all of us, and it is an
12 issue of concern to all Albertans, or certainly a large
13 share of Albertans.

14 Nuclear power, I was very pleased by the movie
15 last night and the discussion. Some people didn't like the
16 movie, but I think it served its purpose. It initiated a
17 very useful and very good discussion.

18 Industrialization of the province, whether that is
19 good or bad, is certainly an issue that PAC and the ECA and
20 all the Advisory Committees have to look at.

21 I'd like to know if you are up to the challenge;
22 are you willing to face that challenge? I guess that is
23 what we are doing here this weekend is looking at options
24 for the future, and we have to look at ourselves and look at
25 whether we are willing to face that challenge, whether we
26 are up to facing that challenge. What are the ECA's and
27 PAC's options for the future?



1 MRS. B. HUNTER: Thank you, Martha.

2 I'm now going to call on the Mayor of Grande
3 Prairie, Mr. Impey.

4 MAYOR IMPEY: Good morning, members, guests, ladies
5 and gentlemen. Welcome to Grande Prairie, what we call the
6 swan city of Alberta. I believe it is fitting that you
7 should be holding your annual meeting in Grande Prairie. In
8 many ways, a lot of us feel that we have more environment
9 than many places. This, of course, is a bit of a fallacy;
10 we are only closer to a lot of things that are perhaps in
11 more of a natural state than some of the more heavily-
12 populated urban centres.

13 We appreciate this and have a concern that we
14 preserve our environment and learn to live with it in
15 harmony. I suggest that it is perhaps also the goal of many
16 of you that are assembled here today.

17 However, I also suggest there is a further role
18 for you to play, and perhaps to some extent you are, namely
19 that of protecting us from our environment, that part of the
20 environment that we create through the effects of what we
21 commonly call growth and progress. This, I suggest to you,
22 is more difficult to achieve than the earlier goal mentioned.
23 However, that is the direction that I would urge you to
24 focus your attention specifically on over the next period of
25 time.

26 Again, ladies and gentlemen, welcome to Grande
27 Prairie, share and enjoy our environment with us while you



1 are here, and I look forward to being able to partake of
2 part of your agenda over the next few days. Thank you.

3 MRS. B. HUNTER: Thank you very much. Mr. Impey has
4 advised me that he has to leave fairly soon, so you have our
5 permission to just walk out when you wish. We know that he
6 is going to be back with us during some of our sessions.

7 I would like now to call on Mr. Crerar. He is the
8 Chief Executive Officer of the Environment Council of
9 Alberta. Mr. Crerar.

10 MR. A. CRERAR: Thank you, Betty. I guess the best
11 way to greet you is you-all.

12 I was rather amazed in coming up here and in being
13 here from perhaps two directions - one was the numbers that
14 turned up. We wondered when Grande Prairie was chosen just
15 how many people would want to come to Grande Prairie in the
16 first week of December. It is not the kind of thing that
17 sort of Moscow in February or something like this, it does
18 not have that ring, or even like Calgary, yet last year we
19 had our meeting in Calgary and we had fewer people turn up
20 in that heart, that dynamo, that place where you go to do
21 Christmas shopping; I guess you can do Christmas shopping
22 here, too. Good idea. So number one, I am heartened by the
23 turnout that we have, and the number of you who have come
24 along. I hope it is not just a first time because you want
25 to see Grande Prairie before you -- no, it's not fitting to
26 mention that. But that in fact you wanted to see what is
27 really a very interesting place.



1 Part of that interest is, all right, you may have
2 more environment here than they have in other places, but I
3 doubt it; in some ways you have less. But one of the things
4 that I find about this city is the one that arouses more
5 controversy, more complaints, more concern or elements of
6 discussion. There is a building, complex of buildings, I
7 guess, the Grande Prairie Regional College, designed by
8 Harold Cardinal which, we passed it in the dark I guess on
9 our way in from the plane. I've heard more people from
10 Grande Prairie tell me how many things are wrong with it,
11 none of the people that work in it, actually, but people that
12 live around it and see it every day because it is so unusual,
13 it is such an unusual piece of architecture.

14 In Grande Prairie, you may dislike it now, but I
15 can tell you it's one of the most distinctive things that
16 you have in this whole town. It would be, it should be
17 treasured anywhere in western Canada; it is world class,
18 world quality architecture, very unusual, it shocks you,
19 startles you, it, I think, makes you think about things.
20 It makes you think about some of the ways in which that
21 thing has developed with a kind of a tent-like structure
22 to remind you of who was here first, and a whole series of
23 other things. You could look at it and begin doing a little
24 dreaming, and that is one of the things about Grande
25 Prairie. It is a place to do a little dreaming of many
26 kinds.

27 The other thing I like was coming down this morning



1 to breakfast and looking around and seeing that almost
2 everybody at the breakfast table, or in the breakfast dining
3 room, were people that I knew, faces from PAC. When we were
4 in Calgary last year, PAC people were little islands sort
5 of floating in a great sea of business faces and briefcases
6 and so forth and so on. Here we are in a place which is to
7 scale, where we are identifiable, a real force. I think,
8 let's think about that in terms of where we come out at the
9 end of this particular conference.

10 We are in the mass of society of Alberta, we are
11 little islands of environmental concern, but I think we can
12 provide some infection, some transmittal of these concerns
13 over a wider area, until perhaps we can all come together to
14 become a dominant, a majority.

15 Well, maybe that is sort of going off a little too
16 far in the future, but it is the kind of direction which we
17 should be moving.

18 Well, all of that is just a prelude to say welcome,
19 welcome to Grande Prairie, welcome to our conference,
20 welcome to your thoughts on options for the future, and I
21 wish you every success, and I'm sure we're going to enjoy
22 it, every one of us. Thank you very much.

23 MRS. B. HUNTER: Thank you, Alistair.

24 Our next item is An Introduction to the Region.
25 I feel that both Mr. Impey and Alistair Crerar have given
26 us some of the setting for this introduction. Mr. John
27 Jarvie is manager of the Regional Planning of the Regional



1 Planning Commission of Peace River. He is responsible for
2 organizing the preparation of a regional plan for the entire
3 area included within the boundaries of the Peace River
4 Planning Commission. The Planning Act requires that this
5 plan be adopted by the end of next year, 1982.

6 John has been with the Commission in Grande
7 Prairie for three years. He was previously involved in
8 regional parks planning with the Metropolitan Area Planning
9 Commission in Halifax, Nova Scotia, and with neighbourhood
10 and municipal planning in Halifax and the City of St. John,
11 New Brunswick. He also has worked with architectural firms
12 in Dartmouth, Nova Scotia, and Ottawa, Ontario. John, we
13 are looking forward to your introduction.

14 MR. JOHN JARVIE: Thank you, Mrs. Hunter. Good
15 morning; I don't know what I should say in terms of ladies
16 and gentlemen, but I'm afraid I will have to use that term.

17 I'm very pleased to be here this morning. Peace
18 River Planning Commission shares many of the concerns that
19 the Environmental Council and your committees are also
20 interested in, and in reviewing and looking at your agenda,
21 issues such as acidification of lakes and rivers, and
22 hazardous waste management, planning for resource
23 communities, outdoor recreation, environment for the future,
24 to a certain extent these are all issues that the Regional
25 Planning Commission has to struggle with and has to come up
26 with some solutions to in the context of its jurisdiction
27 for land use planning within the region.



1 There are a lot of commonalities between the work
2 that you might do as a council and as committees and the
3 responsibilities that the local representatives on the
4 Commission are charged with. This morning I was asked to
5 prepare some sort of an introduction that would help you to
6 appreciate some of the variety involved in the biophysical,
7 cultural, demographic features and so on, in the region.
8 Rather than attempting to describe those verbally, I've
9 chosen to present to you a slide show, a taped slide show
10 that the Commission has used in the past to describe some of
11 the features of the region and some of the reasons why
12 planning will be necessary over the many years ahead.

13 This particular slide show and tape material was
14 circulated around the region at various municipal events,
15 affairs, rodeos, and that sort of thing, in the summer of
16 1980, for the purposes of encouraging interest in the
17 regional planning process and making people a little bit
18 more aware of some of the things this Commission is doing.
19 I will show you this material, you may notice a few
20 references to last year, and you will appreciate that in
21 respect to this presentation, last year was 1979 as opposed
22 to 1980.

23 (FILM BEING SHOWN)

24 MR. JOHN JARVIE: I hope that will help to give you a
25 little bit of appreciation and some impressions of what the
26 Peace River region is all about. You can appreciate the
27 need for concern for environmental issues is extremely



1 important in this region. We started discussing with some
2 local counsellors last night some of the environmental
3 planning policies that have been placed in the regional plan
4 for discussion purposes, and several points were being made
5 as to the significance of these policies and why we ought to
6 have them at this particular point in time for this region.

7 I think that most of the people there would have
8 agreed that the necessity for careful management and planning
9 of the environment in this area is particularly critical from
10 the standpoint of the vast diversity, the particular
11 sensitivity that some of our natural environment has, and
12 with that sensitivity, the major impacts of some of the major
13 resource development might have in the future.

14 Also, because perhaps we are in a relatively
15 advantageous position in this region in that many mistakes
16 that have been made in other parts of the country, in other
17 parts of the province, haven't yet been made here, we look
18 forward to being able to perhaps avoid some of those problems
19 in the future and benefit by the particular time that the
20 development might take place here. Thank you.

21 (APPLAUSE)

22 MRS. B. HUNTER: Thank you very much, John. I hope
23 you are going to be with us for the remainder of the sessions.

24 MR. J. JARVIE: This morning, at least.

25 MRS. B. HUNTER: Okay, thank you.

26 The next item on our program is a slightly
27 different slant on the development of the Peace River



1 country. John Shannon was born in Minnesota where he taught
2 school for several years as a science major. In 1968,
3 however, he moved north. He came to Athabaska where he again
4 taught school maths and science. He stayed there for 11
5 years. While there he was very active in the community, a
6 community-conscious teacher. So that it was a natural move
7 for John to go to the Northern Development Branch in 1979,
8 as his community interest and development was much of this
9 new challenge.

10 John is married, he has three children, and is
11 stationed now in Peace River. We are pleased to have him
12 with us. We were pleased to have him with us last evening
13 for our film and our social hour, and we look forward, John,
14 to your presentation this morning.

15 MR. JOHN SHANNON: Good morning, you-all. I was at a
16 meeting the other night where there was an individual that
17 was talking; when he got up in front he said he really
18 didn't know what he was going to talk about. Unbeknownst
19 to several of the people, he had placed his mother in the
20 very back portion of the room. When he got to the front he
21 said, "What would you like to hear me talk about?" His
22 mother stood up in the back and said, "About a minute and a
23 half."

24 I hope that I don't go much longer than a minute
25 and a half, or if I do, I hope that you will bear with me.

26 The Northern Development Branch is the
27 secretariat for the Northern Alberta Development Council,



1 and the Northern Alberta Development Council is very similar
2 to some of you people here in that it is a group of lay
3 people from across the north who have been appointed to a
4 body that goes across the north to listen to northern
5 concerns, and these northern concerns then are reported back
6 to the government and hopefully some actions will take place
7 in regard to the northern concerns.

8 So when I refer to the Northern Alberta
9 Development Council, I am referring to this body that
10 represents northerners in a region of northern Alberta that
11 is 60 percent of the province and 10 percent of the people
12 in Alberta. It is a line that is roughly 60 kilometres
13 north of Alberta if you draw it across the map east to west.

14 In addition, I'm going to talk about the
15 development potential of the Peace region, and it may sound
16 that you're going to get the same thing as what John Jarvie
17 just gave you; I hope that I have a slightly different
18 approach to this, so that you will find that there is
19 something of interest in what I present.

20 Also, when I refer to the Peace River region, I'm
21 going to be referring to Census Division 15, which is pretty
22 close to approximating the Peace region. So if some of the
23 information that I give you is slightly different from that
24 of John, it is not that we disagree, it's just that we use
25 a little different boundary.

26 The development potential of the Peace region:
27 When people think of the development, most of them first



1 think of economic growth or an increase in the things of
2 life. I won't let you down on this point; I'm going to tell
3 you something about the things of life, or I should say I'm
4 going to provide you some facts. However, I will also
5 present some alternate thoughts on development potential
6 to take into account the psychological well-being of the
7 people.

8 At a time when an unprecedented number of new
9 industrial projects are being completed or proposed for the
10 Peace region - primarily because of the immense wealth of
11 natural resources - an increasing number of impacts are
12 becoming evident. To gauge the various economic, social,
13 and environmental consequences would require considerable
14 time. My task is to try to capture this in a few minutes.

15 First of all, I would like to talk about the
16 things of life or some facts that you should really throw
17 out so that people feel secure that they have something to
18 hold on to.

19 With only 5 percent of Alberta's population and
20 30 percent of its land, the area within the Peace region is
21 sparsely populated. However, the region possesses a wealth
22 of natural resources, both renewable and non-renewable.
23 These are great assets in a world where population continues
24 to grow, renewable resources are occasionally poorly
25 managed, and non-renewable resources are being depleted.

26 In terms of agriculture, one of the stabilities
27 of the region, at last count there were 8,120 farms with a



1 total of 7 million hectares in the area. The region's farm
2 population of 24,500 live in various locales from Valleyview
3 High Level. In the Fort Vermilion/LaCrete area, where
4 agricultural land is still being pioneered, homesteaded as
5 you might wish to refer to it, we find the most northerly
6 farming area in the world. It is estimated that field crop
7 production can be increased by as much as 50 percent over
8 the next few years in the Peace region, that is, of course,
9 if they don't steal all of our water.

10 In recent years, a number of processing plants
11 have been established for rapeseed, alfalfa, animal feed,
12 meat products, fluid milk and honey. Difficulties persist
13 in the movement of grain, since most farmers are located at
14 a distance from elevators, as in the Valleyview and Fort
15 Vermilion regions.

16 Regarding forestry: Six of the ten provincially-
17 administered forests lie wholly or partly in the area. They
18 contain approximately 4.3 million hectares of potentially
19 productive forest. Extensive reserves of timber are managed
20 on a sustained-yield basis. During the past decade, a
21 number of small sawmills have closed, mainly due to
22 technological change in the industry. Attention has turned
23 to pulp and paper mills, and mills that produce veneer and
24 waferboard.

25 Relatively small numbers of people are employed in
26 commercial trapping and fishing. Lesser Slave Lake is the
27 largest producing commercial lake, with a production of about



1 2 million pounds for that region. Registered trappers in
2 the Peace region harvested about 21,000 beaver in the 1978/7
3 year, and pelts of about 20 other species. The annual
4 income of trappers has risen due to rising prices; but, the
5 price of fish has fallen significantly such that the future
6 of fishing is in jeopardy. In addition, the industry is
7 being very sorrily affected by some of the water quality
8 situations across the province. Since this is largely an
9 occupation of native Albertans, it has had serious
10 implications for the Metis and Indian population which
11 represents 5 percent of the population of the region.

12 The tourism and recreation industry in the Peace
13 region is very much linked to the abundance of sport
14 fishing, hunting, wildlife viewing, camping, and other
15 outdoor experiences. As Mayor Impey said, we have a lot of
16 environment to take a look at.

17 There is some 450 accommodation industry
18 establishments that are found in the zone.

19 Non-renewable resources in the area are probably
20 the glory boys; most of them are energy-related; oil and
21 gas, oil sands and coal. Less important than these, from an
22 economic point of view, are sand, gravel and peat moss.
23 Deposits of iron ore in the Clear Hills offer potential, as
24 do the silica sands of Peace River, which may be exploited
25 commerically in the near future.

26 In 1979, approximately one-quarter of Alberta's
27 coal production came from underground and surface deposits



1 in Grande Cache. Abundant reserves are available and
2 production is envisaged in Judy Creek and a number of other
3 areas.

4 Much has been said through the news media about the
5 oil and gas in the Peace region: 40 percent of Alberta's
6 remaining recoverable crude oil reserves and an increasing
7 proportion of its remaining marketable natural gas is found
8 in the region. There are nine major gas fields and fifteen
9 major oil fields. The 56-inch diameter Alaska Highway
10 natural gas pipeline will one day cross the region. Two
11 major oil sands deposits in the Peace region contain 16.4
12 trillion cubic metres of crude bitumen. Total cost of the
13 proposed Shell in-situ plant near Peace River will likely
14 run over \$11.5 billion.

15 Significant the 11.5, just as an aside, there has
16 been no industrial project in the Peace region that has gone
17 over \$100 million and now we're talking in several billions
18 of dollars.

19 Unfortunately, from an economic point of view, the
20 strength in the primary industries has not been matched in
21 the manufacturing industry. Aside from a few processing
22 plants, construction is next in order for the economy. It
23 is oriented mainly towards gas and oil and transportation.

24 Most of the major transportation routes to the
25 Northwest Territories and Yukon cross Peace region,
26 including the Great Slave Lake Railway and the MacKenzie
27 and Alaska Highways. I have difficulty with the word



1 "Alaska" because it is so close to Athabaska and I spent so
2 many years in Athabaska. Yet the great distances, climate,
3 and sparse population, can lead to costly delays in
4 delivery of goods and services. However, these north-south
5 routes are being developed; Highway 35 has been paved to the
6 border, that is the Northwest Territories border; and Highway
7 67 is nearing completion. To some of you it may seem strange
8 that we're talking in terms of getting the road paved let
9 alone getting a road built. So many of you live in areas
10 where the roadways are already in place.

11 The percentage of people employed in the service
12 and trade industry is less in the Peace region than it is in
13 many regions of southern Canada. Entrepreneurs face the
14 disadvantage of a small local market; many locations are not
15 only physically distant, but access is sometimes poor.

16 The provincial and federal governments have
17 designated Census Division 15 as a region for special
18 assistance to small businesses. This includes tax incentives,
19 management assistance and special loan arrangements.

20 Well, that concludes the facts portion of my
21 presentation. Now I would like to spend the remaining
22 portion of my presentation, of the time that I have with you
23 this morning, to get into a discussion of a viewpoint of
24 development that parallels economic development.

25 When I think of development, it might be different
26 than a lot of people, although I was very happy to hear this
27 morning the comments of the Chairman and the Mayor of Grande



1 Prairie talking about the potential developments, and their
2 viewpoints, I think it corresponds very closely to what I am
3 going to be talking about. I would like to refer to it as
4 the northern viewpoint, and I'm sure that there are some
5 people in the south that have the same viewpoints, so I
6 won't call it that.

7 I would like to redefine development. I would
8 like to talk about development in the Peace region as an
9 improvement in the way of life of the people in the region.
10 This would mean that economic development must be
11 accompanied by an increase in material and psychological
12 well-being of the people already here. This means that we
13 should try to balance the growth to ensure that extremes of
14 wealth and poverty do not exist side by side. We are
15 talking about economic geographical balance; we are talking
16 about economic growth balanced in time; we are talking about
17 a balance between private and public sectors; we are
18 talking about environmental balance; and we are talking
19 about social balance.

20 At a time when a large number of new industrial
21 projects are being proposed for the Peace region, it is
22 entirely appropriate for the people to be asking themselves
23 how to minimize the social impact of economic growth, and
24 how to ensure that northerners share fully in the economic
25 benefits of development. Although northerners do not expect
26 to have an equal standard to that of the south, they do
27 expect to have a raised level of minimum standards as a



1 result of industrial activity.

2 Allowance must be made for the new people arriving
3 for the increased industrial activity. This means houses,
4 goods and services, education, health care and social
5 services. Often there are too many people chasing too few
6 houses, schools, hospitals, store goods and repair services.
7 Proper preparation and planning should allow for the new
8 demands to be met. But, realistically, governments and
9 business take time to respond. We won't say they are slow,
10 but we will say they take time to respond.

11 Although the Peace region has a low rate of
12 unemployment compared to other provinces, there are areas of
13 high unemployment. This is especially true in remote
14 communities with substantial native populations.

15 There's also a shortage of highly qualified
16 manpower. This is further complicated by the fact that
17 economic decisions regarding development take place outside
18 the region - in boardrooms and government offices. This
19 reinforces the need for strong information exchange
20 mechanisms to ensure public participation by northerners.

21 The Northern Alberta Development Council, of which
22 I am associated, is one of the avenues that I feel is very
23 important to facilitate that public participation. Just
24 over a year ago, they held a conference right here in Grande
25 Prairie. The conference was called "Alberta North in the
26 80's," and I like to think that the Alberta North in the
27 80's was a very similar theme to what you're talking about



1 here, "Options for the Future." It was the purpose of the
2 conference to give northerners an opportunity to express
3 their views to government and private sector decision-makers
4 on issues which loom as significant in the decade ahead.

5 For the kick-off of the conference, the slide/tape
6 presentation was prepared which we called "Challenge and
7 Opportunity." It probably could have been titled "Options
8 for the Future." I have brought it along to present today.
9 We have taken the slide presentation and put it on 16
10 millimetre film so that we can carry it around with us a
11 little bit easier. I would like to show it to you. I feel
12 that it was produced for the Northern Alberta Development
13 Council and presents many of the things that you're talking
14 about, and I guess in all modesty I have to admit that I
15 like the film very well because I wrote most of the script.
16 So, since it gets boring to sit and listen to a person talk
17 for a long length of time, if you can just imagine that now
18 I have transferred myself to the film and I would ask that
19 as you watch the film, that you would listen to the questions
20 that are raised about the future development potential, in
21 this case of Northern Alberta, but it also applies to the
22 Peace region.

23 So if we could have the film now.

24 (FILM BEING SHOWN)

25 MR. J. SHANNON: I would like to thank you very much
26 for having me come to present some information to you today.
27 We are always happy to put forward the case of Northern



1 Alberta Development Council to people who are decision-
2 makers in the Province of Alberta. And I consider you to be
3 decision-makers. Thank you.

4 MRS. B. HUNTER: Thank you very much, John. I'm
5 quite sure that our two speakers would entertain questions
6 if anybody has any. We are running fairly much to schedule,
7 and I think we can take five or ten minutes from the break
8 if there are any questions. When you do ask them, would you
9 please identify yourselves for the convenience of the court
10 reporter.

11 MR. J. SHEMANCHUK: My name is Joe Shemanchuk, and I
12 don't wish to ask a question, but I would like to make a
13 comment. I wonder if our speaker was aware of the
14 development of agriculture that the Canada Department of
15 Agriculture is doing an initiative strategy in the expansion
16 of agriculture into the frontier, while as you have
17 mentioned, this is the last existing frontier for
18 agricultural development. The program is not in effect but
19 our Minister of Agriculture has established a strategy plan
20 as a new initiative. They are going to try and produce
21 two-thirds more agricultural products by the year 2000,
22 two-thirds more than what Canada is producing now; that is
23 their objective, and the objective will be met from several
24 strategic plans, but I can't list them here. I don't know
25 them all. But one is better variety of crops, forage
26 production, livestock production, looking at different
27 angles. I just wanted to make a comment that this is the



1 plan for not only northern Alberta, but it is an
2 agricultural plan for northern Canada.

3 MRS. B. HUNTER: Thank you, Joe. Anyone else? Yes,
4 Martha.

5 DR. M. KOSTUCH: I'd just like to comment that we are
6 not decision-makers, we are advisors, and I wish to just
7 clarify that point.

8 DR. T. VEEMAN: Terry Veeman, Science Advisory
9 Committee. Do you think the feelings about water diversion
10 that you alluded to are widespread in this region, the
11 resentment about diversion, or is this just an embryonic
12 feeling that has started to develop?

13 MR. J. SHANNON: I would like to make a couple of
14 comments. First of all, in regard to the statement about the
15 agricultural land, yes, we are aware that agricultural land,
16 that there is an attempt to increase production in Canada.
17 I do consider you people to be decision-makers in that you
18 are people of Alberta that are the decision-makers. You are
19 the government in that sense. That is the feeling that we
20 have that the people is the government, and the government
21 doesn't sit in Edmonton.

22 Thirdly, in terms of the agriculture that is going
23 to be developed, yes, we can develop agriculture if we drain
24 some of the present lands that are full of water in northern
25 Alberta. If we make allowances when we are developing the
26 land in northern Alberta, so that we ensure that erosion does
27 not occur along with the clearing that occurs, and the



1 drainage of the water, and yes, we are concerned about water
2 because although we have a lot of it, we also have a problem
3 with the water in terms of how it leaves the region, as well
4 as how much leaves the region. The interbasin transfers
5 that were suggested, we are concerned about those interbasin
6 transfers. The Northern Alberta Development Council has
7 gone on record through Elmer Borstad, who is the MLA for this
8 area, who sponsored a motion in the legislature last year in
9 regards to drainage. We are concerned that interbasin
10 transfer might take place, because we are concerned about
11 losing the water, which may seem to be a dilemma situation
12 in that we have a lot of it, it is just in the wrong places
13 in northern Alberta, I stress.

14 MRS. B. HUNTER: Thank you. Gerry?

15 MR. G. PASCHEN: Gerry Paschen, Non-Renewable
16 Resources Group. The speech was well, I guess, presented to
17 us, and we warned that there would be lots of questions in
18 the film, and yes, there were lots of questions. I think
19 you touched on a lot of subjects ranging from low
20 unemployment, social problems and et cetera, and at the end
21 the question was raised or indicated to us that we are
22 probably part of the decision-makers. I think that maybe
23 that is misled in some or fashion, because the decision-
24 making comes from the very top, and as we know, as of last
25 night, two petrochemical plants were announced. And that
26 is a shock to me, although not necessarily for the people of
27 the north. But when we have the Grande Prairie region here



1 with a very low unemployment and a housing situation and so
2 on, I think that ultimately with the shortage of skilled
3 labour that there will be greater escalation, and I think
4 maybe the Environment Council may not necessarily be
5 involved additionally into any of the decision-making for
6 that. But I don't think we have really answered the question
7 of what development is going to bring to the Peace River
8 district.

9 MRS. B. HUNTER: Are you directing any question to
10 either one of the speakers, or is that just a commenq?

11 MR. G. PASCHEN: It is more or less a comment; I
12 think the Peave River district should raise that question
13 maybe to the government, because the decisions are made from
14 the very top. My comment was that the announcement that
15 three petrochemical plants is another typical example as to
16 what comes from the very top from our MLA's.

17 MRS. B. HUNTER: Thank you. Do either gentlemen want
18 to respond to that?

19 MR. J. SHANNON: I would just like to make a comment
20 in regards to that. I have a copy of the conference report,
21 Alberta North in the 80's. In the conference report is a
22 summary of the recommendations and concerns of northern
23 Alberta, northern Albertans, that was presented to the
24 so-called decision-makers, and realistically I guess we have
25 to say the decision-makers are in Edmonton in the boardrooms.
26 But hopefully, this will have an influence, and here is
27 where they get their ideas that come forward, and if enough



1 of us get together that have similar ideas, then the
2 decision-makers will have the same ideas as ours.

3 MRS. B. HUNTER: Thank you. Another question, Iain?

4 DR. I. TAYLOR: Both the presentations have a common
5 theme in the sense that they were talking about the impact of
6 development and projects and so on in the north. Both of
7 them also had the common theme that out of this was going to
8 grow a large number of social and environmental -- physical
9 environmental problems. Both of them seemed to indicate that
10 these were soluble problems. I would just like to ask a
11 question to either or both of the two speakers and have them
12 indicate what reasons they have to feel more or less
13 confident that their region will be able to handle the
14 decisions of multi-national corporations in any better or
15 any worse way than anywhere else in the world.

16 MR. J. JARVIE: I'm not sure that I would be
17 prepared to say that we expect that decisions of multi-
18 national corporations or other kinds of major development
19 decisions would necessarily be handled in any better fashion
20 in this particular part of the country, or this particular
21 part of the province, than any other. But I would offer
22 that there is on the part of quite a number of the people
23 in the region a concern for the potential impact of these
24 kinds of developments, and I believe a strong attempt or
25 strong feeling that they will work to try and resolve ways
26 of dealing with the particular impacts that might take place.
27 Now that may sound like a fairly weak kind of response, I



1 suppose, but I don't think that anyone can predict that this
2 particular region will respond or will not receive some of
3 the negative kinds of impacts that inherently seem to be a
4 part of macro-scale developments in the past. I think all
5 we can really hope to do, and maybe this is what John was
6 getting at when he suggested that you did have a decision-
7 making role, and that is to make sure your concerns become
8 part of the decision-making process.

9 I don't think that any of us imagine, at least the
10 Regional Planning Commissions, see themselves as being the
11 ultimate decision-makers in all these various issues; it is
12 certainly a debate many times as to who has the jurisdiction
13 and what the limitations of the jurisdictions of the various
14 decision-makers are. I think we have to work towards that
15 all the different interests that have to be considered, and
16 all the different aspects of these problems come to the
17 fore, but I think that is really perhaps the role of your
18 Advisory Committees and your Council, and also of people
19 like the Northern Alberta Development Council or the Peace
20 River Planning Commission.

21 MRS. B. HUNTER: Would you like to add anything to
22 that, John Shannon?

23 MR. J. SHANNON: I would like to add two words -
24 pioneering spirit.

25 MRS. B. HUNTER: Are there any other questions? If
26 not, we will break for refreshments, and thank you both,
27 gentlemen.



1 (REFRESHMENT BREAK)

2 MRS. B. HUNTER: We would like to get this session
3 started; would you please take your seats.

4 We have two speakers before noon, our first one is
5 Judy Roschlaub; she is a member of the Peace Country Acid
6 Soils Committee. Judy graduated from the University of
7 Alberta with a Bachelor of Science degree. She became
8 involved opposing sulphur emissions when the sour gas plant
9 was proposed for Tepee Creek; the Roschlaub farm is ten
10 miles down wind. The Peace Country Acid Soils Committee
11 was formed of members from the National Farm Union and
12 Unifarm to pass on information to other farm communities
13 where sour gas plants were planned.

14 The committee has been involved either directly
15 or indirectly in five ERCB hearings. Judy Roschlaub.

16 MRS. J. ROSCHLAUB: Thank you. Ladies and gentlemen,
17 forgive me if I repeat some of the same information that I
18 presented to some of you in Lethbridge two years ago. My
19 reasoning is that if I can't remember what I said, you
20 probably can't either.

21 During the intervening two years, we have one new
22 sour gas plant near Hythe and a proposed one near Silver
23 Valley. I will show you where these are on the map.

24 This is Grande Prairie here, Hythe is over here,
25 and Silver Valley is up here.

26 There are other sour gas plants in the area, one
27 at Tepee Creek, one at Gold Creek and at Sturgeon Lake



1 south. This is the approximate location of the Gold Creek
2 one, Sturgeon Lake is south in this area, and Tepee Creek is
3 here.

4 According to a growth study provided by the Peace
5 River Regional Planning Commission in November of 1979, we
6 will have nine to fourteen sour gas plants in the area by
7 1995. According to ERCB estimates, there will be 16,000
8 long tons yearly of sulphur dioxide vented by sour gas
9 plants in the Peace River area of Alberta by the year 2008.
10 In addition to this, 50,000 long tons yearly of sulphur
11 dioxide will be emitted from the Peace River tar sands.
12 These figures represent the three or four percent left after
13 standard sulphur recovery levels. That is 96 percent for
14 the Peace River tar sands, and 97 percent for the sour gas
15 plants.

16 The accumulative effect of these emissions year
17 after year is worrisome. Of these emissions, 14 to 100
18 percent fall in the form of acid rain.

19 Farmers here are not like the farmers from southern
20 Saskatchewan who complained that it was so dry they would
21 welcome any rain, even acid rain. Acid rain should more
22 correctly be called acid deposition, as then it would
23 encompass both dry as well as wet acidic substances. All
24 sulphur dioxide emissions, whether in gaseous form,
25 particulate, or precipitation, can cause acidification.
26 Thus by focusing on acid rain alone, one misses a large
27 part of the province that has environmental acidification.



1 who is the director of the soil and seed testing lab of
2 Alberta Agriculture.

3 Soils were sampled in a grid pattern downwind to
4 the plant that had been in operation for 16 years. Soil PH
5 levels were lower in soils taken closer to the source, that
6 is three to six miles downwind from the source. They were
7 lower than at greater distances from the source.

8 This information was presented at the Alberta
9 Sulphur Gas Reserach Workshop, and they plotted the samples
10 that they took. They were taken in a grid pattern, and
11 altogether, 22 samples were done. The majority of them were
12 in uncultivated land, and what they found was that there was
13 a PH drop of one full PH unit closest to the plant, but they
14 had to make some assumptions, and because no soil samples
15 had been done at that area prior to the plant's start-up.
16 The assumption that they made was because most of the soils
17 around the area were at a PH about 7.5, except near the
18 plant, then they assumed that that was what it would have
19 been at near the plant.

20 This is the gas processing plant. What they did,
21 they sampled eight miles this way and eight miles that way
22 from the plant, and the PH here was about 6.3. All this,
23 of course, is downwind.

24 Now as they got further away, out beyond 11 miles,
25 there was no depression in the PH.

26 But still, this is not proof that would stand up
27 in a court of law that sour gas plants cause acidification



1 of the soil. It is important to remember that the soil
2 around Balzac has better buffering capacity than local
3 soils. Most samples have free lime and more organic matter
4 than here, yet it dropped one PH unit and became ten times
5 more acidic in 16 years. It would happen much faster here.

6 At that particular plant, 44 long tons daily of
7 sulphur caused one unit decrease in 16 years. At this
8 recent sour gas plant that was put up near Hythe, they were
9 talking about venting about 10 long tons daily of sulphur,
10 and using the same sort of figures, this would cause a .23
11 unit decrease in PH in 16 years. The projection for this
12 plant is 20 years, so that works out to .29 unit decrease in
13 PH.

14 A .29 decrease in PH means in effect that the soil
15 has become quite acidic, but actually our soils would be
16 more acidic again because we lack these buffers.

17 A decrease in soil PH of .1 unit in the soil PH
18 range 5.2 to 5.5, reduces the yield of barley by two to
19 three bushels per acre. Now if you consider barley is worth
20 \$2 a bushel, if you had a section of land, that is close to
21 \$4,000 loss per year, and similarly in the PH range 5.5 to
22 6, a decrease in .1 unit reduces the yield of alfalfa by
23 400 pounds to the acre, and the loss would be much higher
24 than this.

25 Once again, this figure is only for a .1 unit
26 loss, not the projected .29 units. I hope you understand
27 better the concerns of many area farmers.



1 The Energy Resources Conservation Board aren't
2 interested in farm economics, but they make decisions on
3 sour gas plants. They base their decisions on gas company
4 economics, and mind you, gas company economics are much
5 better than raising cattle.

6 The plant near Hythe projected their gross revenue
7 for the first year of operation at \$125 million, and as they
8 expect a plant life of 20 years, that makes quite a sum of
9 money.

10 The Alberta Government royalties was projected at
11 \$24 million in the first year of operation, and \$200 million
12 over the 20-year span. In addition, the local Indian band
13 were projected to get \$5 million and \$28 million over the
14 20-year life of the plant.

15 Now, compared to these monies, who wants to listen
16 to a bunch of farmers complaining again. The Department of
17 the Environment likes to talk about trade-offs; the province
18 seems to be willing to trade off soil productivity for a
19 growing Heritage Trust Fund. We say soil is our heritage,
20 and far better than any devaluating dollars.

21 Farmers are high energy users, we don't want to
22 shut down the petroleum industry, but we don't want them to
23 shut us down, either. We hope not to fade out, as John
24 Shannon's film shows, but his point about increased input
25 costs is well taken.

26 The industry says it is too expensive to remove
27 the 99.4 percent sulphur that is thermodynamically possible,



1 and we say, okay, then develop only sweet gas reserves now;
2 as they contain no sulphur, the problem is at least
3 postponed. Perhaps in the future when only sour gas is
4 left, they can try the suggestion made recently of pumping
5 the sulphur waste gas down into the oil formation to
6 repressurize old oil fields and increase the oil's fluidity.

7 Renewable energy resources should be developed and
8 encouraged in Alberta. Albertans boast about having more
9 hours of sunshine than anywhere else in Canada; we should be
10 putting it to work. There's a lot of wind, particularly in
11 the southern part of the province, and lots of potential for
12 hydro development on our rivers.

13 My invitation to speak today suggested that one of
14 the topics might be emission standards. Our committee
15 realized how inadequate they are when the Procter & Gamble
16 pulp mill came on stream. The Department of the Environment
17 talks about half our limits and parts per million, but if a
18 rotten stench for miles is permissible, can one honestly
19 speak of a clean air act? Procter & Gamble are allowed to
20 emit 15.2 long tons daily of sulphur dioxide. Watino is
21 a community 80 miles downstream from where Procter & Gamble
22 effluent is dumped into the Smokey River. Some ranchers
23 there raised cattle with good success for years, but lately
24 they complain about 15 percent of their cows abort. They
25 blame Procter & Gamble.

26 The residents at Peace River town would not drink
27 their yellow-coloured water that smelled like woody pulp



1 until the intake was moved from the polluted Smokey to the
2 clean Peace River.

3 When sour gas plant proponents say they meet the
4 guidelines set down by the Department of the Environment,
5 we are not impressed. Nor are we impressed with when the
6 Department tells us that Alberta standards are more
7 stringent than federal guidelines.

8 We think that the Department of the Environment
9 needs to improve their public image. We read that Syncrude
10 and Suncor plants violated the provincial government's clean
11 air standards for sulphur content a total of 139 times in
12 the first four months of this year. "It's only a nuisance
13 thing," says the head of the Air Quality Control. We see
14 other headlines that say, "1,135 Days Pollution Unpunished,"
15 and "Dow Pollution is 700 Times the Limit." Why do we never
16 hear of a prosecution but just public relations dialogue
17 with the offenders?

18 Mr. Cookson stated that most charges are too
19 difficult to prove in court. Is there no relationship
20 between the selected data and various rates of emission, or
21 is it because the industry does its own monitoring and their
22 own figures can not be used against them?

23 We don't know. Perhaps it is just that large
24 companies hire sharp lawyers. Farmers in Alberta could not
25 prove in a court of law that sour gas plant emissions affect
26 them adversely. Fifteen rural families sued two large sour
27 gas plants near Pincher Creek. The issue dragged on for



1 years.

2 Similarly, a rancher near Nevis sued two gas
3 plants near his land. The sour gas plants cleverly settled
4 out of court so there is no precedent established.

5 In Alberta, monitoring of industrial sites is done
6 by the county involved. At least some of the sour gas plant
7 operators know in advance when someone from the Department
8 of the Environment is going to be doing spot checks. Human
9 nature being what it is, it is conceivable that the workers
10 can write down the figures from last month if today's figure
11 is too high. As gas plants usually draw from many wells
12 with various amounts of sulphur, the intake flow can be
13 controlled when an inspector is coming. In Alberta, there
14 are four provincial employees who do occasional spot checks.
15 It would not be necessary to hire another one thousand civil
16 servants, but only four seems ridiculously low.

17 There are no standard emissions for many trace
18 elements that may be affecting human health and animal
19 health. We hear so much about hydrogen sulphide and sulphur
20 dioxide, we tend to forget about the myriad of other
21 compounds that come out of the stack.

22 The young seem most vulnerable; children complain
23 of swollen eyes, stomach cramps, breathing problems, rashes
24 and nausea. Joffre farmers say there are virtually no cattle
25 left in their region, because the death rate of calves
26 climbed nearly to 50 percent.

27 A local deficiency in a trace mineral or a toxic



1 amount of a substance would affect livestock more because
2 their diet is locally produced. We humans usually get our
3 foodstuff from a variety of sources. We get green vegetables
4 from California, and bananas from Central America. Celenium
5 is one of the trace elements essential to the well-being of
6 animals and humans. It occurs naturally in soils, and is
7 taken up by the plants which carry it down the food chain.
8 Celenium and sulphur share the same receptor sites in plants.
9 If there is an overabundance of sulphur, they hog these
10 receptor sites, resulting in a celenium deficiency. Already
11 we are injecting newborn calves with celenium to prevent
12 white muscle disease. We don't need more problems or more
13 of an expense.

14 Even with good management and conscientious concern
15 on the part of sour gas plant operators, weather problems
16 can concentrate emissions on a given area in the vicinity of
17 a sour gas plant. From the extensive work that was carried
18 out in 1972 by the ECA, we learned that looping plumes can
19 be a problem. Because there's only a few monitors at any
20 installation, the incidence of one being at the ground where
21 the concentrated plume touches down is in the order of
22 magnitude of one in 62,500. When plant upsets occur, often
23 up to a hundred percent of the sulphur is emitted for
24 varying periods of time.

25 Earl McCullough, who has participated in studies
26 on soil and plants surrounding several gas plants, said
27 effect can be measured as far as 32 kilometres downwind from



1 the plant. In one particular case, there was a gas blow-out
2 in conditions of high humidity and temperature. Alfalfa
3 plants were visibly injured; yields of alfalfa in the area
4 were reduced by as much as 10 percent, and barley by as much
5 as 5 percent.

6 I want to explain at this time why we have so many
7 acid soils in this area. The main cause was that many of
8 our soils had a fairly lengthy development while under tree
9 cover and higher rainfall climate. The vegetation provided
10 for shading and subsequent high moisture, high soil
11 moisture levels, which together with acid leached from the
12 leaves caused naturally-occurring lime to leach downward to
13 24 to 36 inches or more. This is well below the plough
14 layer.

15 Even without sour gas plants contributing, our
16 soils are becoming slowly but relentlessly more acidic with
17 time, fertilizer, plus calcium remover by crops. The
18 gradual acidification from practices which the farmer has
19 control over can not be compared to acidification resulting
20 from deposition which we have no control over, and does not
21 contribute to the productivity of our land.

22 The way to amend soil acidification is with lime,
23 but it is costly. Presently lime is trucked from Exshaw in
24 southern Alberta. The government pays about half the
25 trucking charges, but it still costs farmers about \$30 per
26 ton plus application costs. At the liming demonstration
27 at Tepee Creek, the rate of application was three tons per



1 acre. At this rate to raise the PH to an ideal 6.5 would cost
2 many farmers about \$100 per acre, or that works out to
3 \$64,000 for a section of land.

4 Mind you, farmers probably would not lime a whole
5 section; they do field tests and decide what areas to put the
6 lime on. The other alternative is to grow acid-resistant
7 crops such as oats and grasses.

8 Development of local deposits seem a better
9 solution. There are limestone deposits brought up from deep
10 in the earth by underground water and re-precipitated. Some
11 of these are in the Saddle Hills. They are called marrow, and
12 some of these contain about 60 percent limestone. Since many
13 of these are on Crown land, the cost per ton to farmers would
14 be less. There would still be some problem with grinding,
15 spreading and incorporating into the soil. Regardless of
16 where the lime comes from, who's going to pay for it?

17 Will the government compensate the landowner for
18 the change that has been legalized by the air standards set
19 by the province and assumed to be obeyed by the sulphur gas
20 plant operators?

21 The operators should be responsible for all
22 inadvertent emissions exceeding the standard. If there are
23 two sour gas plants close-by, the logistics increase.

24 Presently the gas plant at Hythe needs only to
25 monitor soil buffering capacities near its plant for the
26 first two years of plant operation. Environmental monitors
27 ideally should be carried out before a plant starts up so



1 that you have a base line mark, and also for the 20 or so
2 years of the plant's life, and perhaps an additional five
3 years. It would probably cost 2 to \$3 million for such a
4 study. It would need control sites away from all gas plants,
5 grids using soil types of comparable nature, farming
6 conditions, as well as natural conditions. Some results
7 would be available in five years' time.

8 Ideally all monitoring would be done by independent
9 bodies and quarterly reports made to the public. Would the
10 industrial sector accept the responsibility for their
11 actions, or would we be in legal tangles still? What is
12 needed is a desire by people, corporations and governments
13 to protect what nature has given us. Otherwise, with delays,
14 exceptions and infractions, regulations become rather
15 meaningless.

16 Recently the oil sands environmental study group,
17 supported by 17 oil companies, told a hearing of the
18 Commons Subcommittee that, and I quote, "It is questionable
19 whether there is a danger to the natural ecosystem in the
20 future." It added that on the basis of what had been learned
21 to date, the government, public and industry are not in any
22 way faced with the danger of urgency with regard to any real
23 threat to the environment attributable to further emissions
24 from the industry. This attitude is so short-sighted.

25 In the 60's, Inco executives were saying similar
26 things; now they have contributed to 140 dead lakes in
27 northern Ontario and Quebec. These executives like to fish,



1 boat or hunt; if there is no fresh place to get away to,
2 have they profited? If emission standards are governed by
3 production goals and rationalized by job creation,
4 environment doesn't stand much of a chance. What is good
5 for the petroleum industry is not necessarily what is good
6 for Alberta.

7 History shows that when man destroys the natural
8 environment that sustains him, civilization rapidly declines
9 and has to move to other areas. Generally speaking, there
10 are no other areas to move to.

11 The present rate of technological change has
12 accelerated and broadened man's scope of damage. Thank you.
13 MRS. B. HUNTER: Thank you, Judy. I'm going to move
14 on to our second speaker this morning, and then we will have
15 a question period in the time allowed.

16 Our second speaker is Dr. Joan Snyder. She's an
17 instructor with the Department of Sciences at Grande Prairie
18 Regional College. She was born in Chicago, grew up there,
19 lived in a number of the large cities and small towns across
20 the United States.

21 She received a Bachelor of Science in biology from
22 Jacksonville University, Florida, in 1961; in 1963 a
23 Master's Degree in Ecology at Emory University, Atlanta,
24 Georgia. She was an atomic energy research assistant and
25 studied the effects of gamma rays on the growth of lichens.

26 In 1971, she obtained her Ph.D. in plant ecology
27 from Emory University, and was again a research associate



1 on the pioneer ecosystems, including plant associations and
2 the effect of plants on weathering granite.

3 In 1970/73, she had a post-doctoral fellowship at
4 the University of Utah, and did research and consulting in
5 nitrogen fixation of desert plants and the reclamation
6 studies on grasses.

7 In 1973/77, she went to Notre Dame University in
8 Kelowna, B.C., and had grants to study the mountain caribou
9 ecology, especially the habitat requirements and the effects
10 of logging.

11 In 1977 until 1980, she was an instructor at the
12 Selkirk College in Castlegar, B.C., and taught classes there
13 on environmental sciences department.

14 In 1978, she taught field ecology courses for the
15 renewable resources technology program in the Northwest
16 Territories. She is currently teaching biology courses at
17 Grande Prairie Regional College, she is an environmental
18 consultant for Comutatas Incorporated in Edmonton, and in
19 her spare time, she is in the initial phases of writing a
20 book on boreal forest ecology for the layman. She has had,
21 as you can imagine, considerable involvement in various
22 conservation groups in both the United States and Canada.
23 Dr. Snyder.

24 DR. J. SNYDER: First of all, you have to forgive
25 me, I have a rather bad cold today, so if my voice is not
26 carrying properly, just raise your hand or yell at me so
27 that I can speak up. Can you hear me all right at the



1 moment?

2 I had planned on starting with a brief review of
3 the basic concepts relating to acid rain. Judy has very
4 aptly covered a lot of this, and I will add a couple of
5 points so that I can go on to what I want to talk about.
6 Acid rain technically is called acidic precipitation. That
7 is because it includes rain, snow, sleet, hail, whatever,
8 that have an acidity below PH 5.6. Now PH 5.6 is the PH of
9 normal rain water, and the reason for this is apparently
10 chemical reactions involving carbon dioxide in the atmosphere
11 that brings the PH from neutral 7 down to this 5.6.

12 Buffering capacity, as Judy mentioned, I would like
13 to just say that buffering capacity is the ability to resist
14 change as a result of acid precipitation, or acid input of
15 any kind.

16 In eastern Canada, acidic precipitation ranges
17 from 4.2 to 5.0 PH. In Alberta, now this is averages, not
18 spot locations, average PH precipitation ranges from 6.5 in
19 southeastern Alberta to about 5 in the extreme northeastern
20 part of the province.

21 There are two kinds of acid rain. The wet
22 deposition which Judy mentioned is acid deposited in rain
23 or snow. Dry deposition, on the other hand, can be particles
24 like fly ash, sulphate, nitrate, gases such as sulphur
25 dioxide, that are deposited on or absorbed to surfaces.
26 These particles are then converted to acids when they come
27 in contact with water.



1 I am supposed to talk primarily about the
2 aquatic ecosystem today, but it is kind of hard to do that
3 when so much of the aquatic ecosystem is dependent on the
4 terrestrial ecosystem. So I will bring in a few points here
5 that are related to our land environment.

6 First of all, sulphur is an essential element, as
7 we all know, to living organisms, and an important component
8 of some proteins. Sulphur dioxide occurs naturally, it is
9 in the atmosphere, it is part of our geochemical cycle for
10 sulphur. Bacteria release sulphates and hydrogen sulphide
11 during the breakdown of dead organic matter. The hydrogen
12 sulphide is then oxidized as sulphur dioxide in the
13 atmosphere, so we already have this somewhat in our
14 atmosphere at all times, regardless of our human activities.

15 Nitrogen oxide is also occurring as part of the
16 recycling of nitrogen. Nitrogen, of course, is extremely
17 essential to life; it's part of all protein and a number of
18 other components of living cells. However, nitrites and
19 nitrates are formed by nitrifying bacteria in the soil, and
20 nitrates are used by plants. Excess nitrogen compounds are
21 denitrified by other bacteria or by photochemical reaction,
22 and released in the atmosphere as nitrous oxide which is
23 N_2O , or as nitrogen gas. So normally, nitrates or nitrites
24 do not occur in any amount.

25 Okay, I will get onto the aquatic ecosystem a bit
26 now. First of all, there are two important physical effects
27 of acidic precipitation on bodies of water. The first one



1 is, of course, that it lowers the PH of the water,
2 particularly in sensitive areas.

3 The second is that acidic precipitation increases
4 the concentration of metal ions in the water, which turns
5 out to be very devastating in some cases.

6 Sufficient amounts of acidic precipitation on soil
7 surrounding bodies of water and land surface waters, can
8 result in gradual loss of the buffering capacity of the soil
9 and the water, as Judy has so aptly pointed out in her talk
10 that the buffering capacity is being lost in a lot of the
11 soils in this area. Initial buffering capacities can be
12 highly variable depending on the composition of the
13 substrata, if it is shallow, sandy or gravelly soil, soils
14 low in calcium or already slightly acidic or very sensitive,
15 while the more clay-like soils with high calcium have a much
16 higher buffering capacity.

17 With the exception of a small area in the
18 northeastern part of the province, and this local area here,
19 Alberta has strongly alkaline soils and surface waters
20 which are able to resist the effects of acid rain, at least
21 for the time being.

22 Much of eastern Canada, northern Saskatchewan and
23 a large part of Manitoba and the Northwest Territories lie
24 over the Canadian Shield. These often shallow soils and
25 bedrock composition render much of the area sensitive to acid
26 rain because of poor buffering capacity.

27 The most sensitive period for water bodies is in



1 the spring when melting snow, which may have accumulated
2 large amounts of sulphates or any of the sulphur nitrogen
3 oxides in heavy precipitation areas, runs off into streams
4 and lakes. At this time, streams can reach extremely low
5 PH levels; this is called spring PH depression. This PH
6 depression is directly related to the amount of run-off and
7 the PH of the meltwater so that you can have a heavy snow
8 the amount of run-off, if it is very rapid, will depress the
9 PH even more.

10 At a PH of 6.5, fresh water organisms remain
11 relatively healthy; they don't seem to have any problems.
12 When you get down to a PH of 6 in fresh water, mussels die
13 out, the little clam-like organisms in fresh water. At a
14 PH of 5.5, smallmouth bass, mayfly larvae, are unable to
15 survive. Mayfly larvae are pretty important in the
16 ecosystem, too, because they are food for some of our fish.
17 At a PH of 5, brown trout and salamanders die out. At a
18 PH of 4.5, lake trout, Atlantic salmon and yellow perch
19 succumb to the acids.

20 It is interesting that at a PH of 3.5, some water
21 beetles, like the whirligig beetle and the water boatmen,
22 thrive, reproduce, and have no apparent effects in this low
23 PH. It is probably related to the life cycle of the
24 beetles, because we find again the young are the ones that
25 suffer the most losses in terms of when exposed to high acid
26 in the water.

27 The damage to fish and salamanders from low PH



1 occurs in the embryos and the hatchlings, and is expressed
2 in various ways such as deformities in the embryos, the
3 inability of the organisms to hatch or to absorb the yolk,
4 and these deformities usually result in death of the
5 embryos.

6 In terms of the aquatic ecosystem, this means that
7 only mature fish survive. There are no replacement
8 populations, and over a period of years the older fish
9 gradually die off or are fished out if anybody is crazy
10 enough to fish in these areas, and lakes or streams become
11 barren.

12 Now one remedy that has been used is to apply
13 large quantities of lime to acid lakes. This treatment can
14 increase the buffering capacity of the water, and raise the
15 PH up to a normal level, and then they restock it with fish.
16 There are at least two problems with this approach. First
17 of all, continued acid rain with a PH between 4 and 5, as is
18 common in many regions of eastern Canada today, will
19 gradually destroy the effects of the liming, so the buffering
20 capacity is gradually lost again and they are back where
21 they started.

22 Now in addition to that, if you consider the many
23 thousands of lakes in Canada and most of them are quite
24 isolated, the possibility of liming all those lakes with
25 thousands of tons of lime on a regular basis becomes quite
26 prohibitive, if not insane.

27 The second important effect of acidic precipitation



1 on surface waters, which is that of increasing the
2 concentration of metal ions in the water, involves some very
3 complex chemical reactions and different effects from
4 different metals and ions in solution. Aluminum is one of
5 the ones that we find is important. Although aluminum is
6 abundant in the environment, normally tightly bound to
7 other elements in the rocks and soil, in acidic medium,
8 however, aluminum ions are released into the water much to
9 the detriment of living organisms where it can be highly
10 toxic in relatively low concentrations. A study of 53 lakes
11 in the Adirondacks of New York State shows that aluminum
12 cations were released in acid conditions in toxic
13 concentration. Further, it was found that lakes with
14 aluminum concentrations of 0.29 milligrams per litre could
15 not support brook trout, whereas the trout could survive
16 aluminum concentrations of 0.11 milligrams per litre.

17 Mortality and gill pathology were studied of
18 the brook trout that were exposed to these situations, and
19 then they did a study using acidic synthetic solution, and
20 they found that aluminum levels of 0.2 milligrams per litre
21 showed a specific toxic response to aluminum at PH levels
22 down to 4.4. That means that in acid conditions, there is
23 a specific toxicity to aluminum, but only down to 4.4 it
24 becomes more acid than that. Although the aluminum cations
25 remain in the water, the effect of uptake is reduced; there
26 is not as much uptake of the aluminum ions in fish. They
27 don't know why that is.



1 To suggest that aluminum cations may limit
2 membrane permeability in ion-transporting cells, I think
3 this is the main mechanism by which it becomes toxic to fish.

4 Another effect of acidic precipitation with respect
5 to metals is the increase in the uptake of mercury in
6 acidified waters. Where mercury is present in sediments of
7 a body of water, certain bacteria are capable of methylating
8 mercury. Methyl mercury is, of course, the biologically
9 active form of mercury in ecosystems. It has been found in
10 Sweden that the formation of methyl mercury in lakes
11 increases proportionately with the decrease in PH values of
12 the water.

13 Laboratory experiments there showed that for a
14 given amount of total mercury in the aquatic ecosystem,
15 higher levels of mercury are found in fish at low PH values
16 than at high PH values. In addition to retarding growth
17 rate in fish, the problem of biological magnification where
18 mercury is passed along the food chain, leads to a very high
19 accumulation of methyl mercury in the top carnivores.

20 The theory is that other heavy metals such as lead
21 may be demobilized in a similar manner, which could result
22 in toxic levels of these metals being in the top carnivores
23 of acidified lakes. The data on that is very sketchy, but
24 this is true for other metals, too.

25 The effects on waterfowl and mammals feeding on
26 contaminated vegetation is not very well documented, either.
27 One might suspect, however, that there would be reduced



1 reproductive potential and retarded growth rates from high
2 metal mercury concentrations in waterfowl and mammals that
3 fed on the vegetation, for instance.

4 Again, because of biological magnification,
5 predatory animals that feed heavily on carnivorous fish,
6 such as eagles, osprey, otters perhaps, maybe even bears at
7 certain times of the year, could theoretically suffer
8 serious losses in heavily contaminated areas. Definitely
9 more research needs to be done in these areas. It seems
10 like wildlife are the last ones that anybody looks at in
11 terms of these kinds of things.

12 In terms of human health, some of the direct
13 effects of acidic precipitation are well documented. The
14 inhalation of high levels of sulphates and nitrogen oxides
15 have been implicated in a variety of respiratory and
16 internal diseases.

17 Indirect effects also present serious potential
18 problems. First, the leaching of toxic chemicals from
19 watersheds could lead to contamination of drinking water
20 supplies, and second, contamination of edible fish and
21 waterfowl, and even some other wildlife such as moose,
22 moose particularly, I guess, by toxic chemicals such as
23 mercury could be hazardous to the health of fishermen and
24 hunters in years to come. The effects of mercury poisoning
25 in humans is well known from the studies of Minnemata,
26 Japan. Minnemata, I think, is pretty well known to most of
27 us. Methyl mercury accumulates in the liver, the kidney,



1 the brain, and causes nervous diseases, hallucinations and
2 death in high concentrations.

3 Alberta has the second highest level of sulphur
4 dioxide emissions in western Canada. Manitoba is number one.
5 There are more than 40 natural gas processing plants that are
6 responsible for most of the emissions. A major concentration
7 of gas plants is centred near Calgary, a second cluster of
8 plants southwest of Edmonton, and there are others scattered
9 various places, and it looks like we are going to have a
10 pretty good concentration of them up here in the future.

11 Total emissions from the plant currently is about
12 892 tonnes of SO_2 per day, or 326,000 tonnes per year.

13 The two tar sands plants at Fort McMurray emit
14 about 20 percent of the SO_2 emitted to the Alberta atmosphere
15 for a total of 134,000 tonnes per year. Another 73,200
16 tonnes of SO_2 is emitted by thermal electric power plants
17 in 1980. Projected growth of the power generation for
18 Alberta is supposed to increase the SO_2 emissions to 312,000
19 tonnes per year by the year 2005. That is just power plants.

20 In spite of the emissions, the Alberta environment
21 is not suffering measurable damage from acidic precipitation,
22 at least not in large quantities or in a general sense.
23 Soils and surface waters in all but a small sector of
24 northeastern Alberta are well buffered and resistant to
25 damage. For example, in the spring of 1945, an attempt was
26 made to acidify down to a PH of 5, a portion of Baptiste
27 Lake near Athabaska to eliminate a fish parasite. The



1 volume of water in the spawning base was estimated to be
2 a strip of water 13 kilometres long by 6 metres wide with an
3 average depth of one metre. Based on the measured
4 alkalinity of the water, 175 parts per million, they
5 calculated that sulphuric acid necessary to neutralize to
6 a PH of 5, the water to a PH of 5, was 14.4 tonnes, so they
7 added their 14.4 tonnes of sulphuric acid, and after addition
8 the lake water PH dropped below PH 5. But within one-half
9 hour the upper waters returned to their normal PH of 8.

10 Acidic conditions persisted in bottom mud for
11 several hours, but by the next day had returned to normal
12 PH. Apparently, the carbonate buffers completely neutralized
13 the acid in that amount of time clear to the bottom.

14 Another study in the same area, and the only other
15 one that I was able to find, reported from Alberta on water
16 bodies of any import, supported the hypothesis of carbonate
17 buffers and concluded that the acid loading is dependent on
18 the amount of carbonaceous material in the lake, and for
19 that region, even the most poorly buffered lakes sampled
20 would be seriously affected only if PH of rain averages
21 below 4.

22 In addition to the buffering capacity of soils and
23 surface waters in Alberta, there is evidence that air masses
24 passing over the Rocky Mountains and across the western
25 prairies pick up calcareous or limestone dust which can
26 neutralize any acid precipitation found in the atmosphere,
27 so that in places where they have good winds, like the



1 Chinook winds, perhaps there is an additional buffering of
2 the air itself. However, there is evidence that although the
3 annual average PH of precipitation in Alberta is higher than
4 5.6, there have been episodes of precipitation as low as PH
5 4.3. There is also evidence that acid rain is falling in
6 the Cree Lake area of Saskatchewan, and Alberta has been
7 implicated as the source of this precipitation via long-
8 range transport.

9 So I would say that even though Alberta may at
10 present be pretty well buffered in most areas from the effect
11 of this precipitation, the projected doubling of emissions
12 of acid rain precursors in Alberta over the next 25 years,
13 poses a serious threat to sensitive regions in
14 Saskatchewan, Manitoba and perhaps even Alberta itself.

15 I think there is still a great deal to be learned
16 about effects, especially in areas that are buffered, about
17 how long it takes for the buffering to be lost, or the
18 buffering capacity to be lost, and many other areas,
19 particularly in aquatic systems, that have higher PH's, more
20 information needs to be gained with respect to wildlife and
21 the effects on wildlife, and I think that's one of the main
22 things that Alberta should be considering is to doing
23 research in areas related to the effects of acidic
24 precipitation.

25 That is essentially what I have to say today.

26 Any questions?

27 (APPLAUSE)



1 MRS. B. HUNTER: Thank you, Joan. We have time for
2 quite a few questions; we have got a good 15 minutes.

3 Martha, did I see your hand going up?

4 DR. M. KOSTUCH: I would like to commend Judy on her
5 speech; I know Judy doesn't give a lot of speeches, but I
6 know she does a good job.

7 I think it is a commonly held misconception that
8 the northeastern part of Alberta is the only part of Alberta
9 that is affected by acid rain, or that is sensitive and
10 could be affected by acid rain. I obtained some studies
11 around Rocky Mountain House that indicated we were looking
12 at PH's downwind from the plants as low as 3.8, and that is
13 in the area of Swan Lake which is a very important fishery.

14 We are also looking at throughfall, rain coming
15 through the trees in that area, also downwind of the plant,
16 having a PH in the area of 3.5 to 4. Those soils are not
17 well buffered. They are very sensitive, and they are very
18 important from a fishery standpoint, from a forestry
19 production and from a wildlife standpoint. We are also
20 looking at damages to the lichen in that area, and I noticed
21 on your introduction that you've done some work in that
22 area. I wondered if you wished to comment. I think that
23 Alberta does have problems with acid rain from the dry
24 deposition if not from the acid rain portion itself, and I
25 don't think that that is limited to northeastern Alberta.

26 DR. J. SNYDER: I am essentially a terrestrial
27 ecologist, so my mandate to speak about aquatic systems is



1 kind of a surprise. At any rate, yes, definitely there are
2 problems, especially with the dry deposition, with acid rain
3 from dry deposition, that eventually converts; it can
4 accumulate material without any rainfall or precipitation of
5 any kind, and when you do get precipitation, it can be -- it
6 can become very acidic, you can have quite an accumulation.
7 Lichens, yes, lichens are very sensitive to sulphur dioxide
8 and there are lots of studies around and studies have shown
9 that you can measure what lichens occur and how close they
10 are to any kind of SO₂ source, emission source, lichens are
11 very good indicators. Some of the information I obtained,
12 I obtained from a publication called "Still Waters". It is
13 very interesting, they have taken a lot of general things
14 and covered them over; they don't often have specifics like
15 we have in specific areas, like we do have right here. We
16 have local problems, we have local emissions here. They took
17 the overall general averages, and perhaps that is not a bad
18 idea, I don't know, because if you look at the overall
19 province, at what point do you have them narrowed down to
20 one quarter section; I don't know. There are a lot of
21 emissions here that have to be dealt with, and we need more
22 research, we have to deal with the economics of it.

23 MR. G. PASCHEN: Gerry Paschen, Non-Renewable
24 Resource Study Group. Thank you very much. You have
25 identified in your speech that Alberta has the highest
26 sulphur dioxide emission expressed in tons. As a scientist,
27 are you capable of communicating with the government on



1 these levels, and do you feel that an impact can be made to
2 bring those emissions down with all these new proposed
3 projects which are on the drawing boards?

4 DR. J. SNYDER: We were talking this morning about
5 nibbling at their heels, and I think that's about all we can
6 do. We can have some impact, we can lobby, we can make some
7 noise; I don't know what else we can do. If enough people
8 make enough noise, changes will take place, but maybe not as
9 much as we hoped.

10 DR. G. GRIFFITHS: Graham Griffiths, Chairman of the
11 Environmental Protection Group. Joan, in your speech you
12 emphasize the good buffering of surface and lake waters in
13 Alberta, and it had a different emphasis from Judy's speech
14 which emphasizes that many of the soils in Alberta are
15 acidic already. Is there any real contradiction between
16 your interpretation of the data and Judy's, because what
17 Judy was saying, it would seem that wide areas of northern
18 Alberta could be seriously affected by acid rain, and that
19 the buffering in the soils is not there?

20 DR. J. SNYDER: When you're looking at the boreal
21 forest system, you are looking at a lot of situations where
22 the soils are acidic, or at least where the forest was, the
23 soils are somewhat acidic. But in terms of the lakes, not
24 much has been done in those areas up here, so we are looking
25 at a lot of questions that need to be answered about northern
26 Alberta; we just haven't looked at it; all we can do is
27 interpret what we have learned from eastern lakes and lakes



1 in Sweden and places like that that do have problems that
2 could happen to us.

3 DR. G. GRIFFITHS: Do you agree with Judy's views on
4 dangers to the soil?

5 DR. J. SNYDER: Yes, I do.

6 MRS. J. ROSCHLAUB: Perhaps I could elaborate on that.
7 We mentioned that this calcium layer was down 24 to 36
8 inches, but most lakes are that deep so there is no problem.
9 The limestone is soluble and most lakes are that deep, and
10 that's where they get their buffering capacity.

11 DR. J. SNYDER: Streams, however, don't necessarily
12 get that, so you can run into a lot of problems in streams
13 where you get the snowmelt with a lot of acid precipitation,
14 and a stream can be a low PH which can cause problems with
15 the fish in streams before they ever get to the lakes. So
16 the surface water is still a problem, or can be a problem.

17 MR. T. COTTRELL: My name is Tom Cottrell; I am on
18 the staff with the Environment Council, and I would like to
19 ask Mrs. Roschlaub a question about legal aspects of sulphur
20 emissions. Perhaps there is someone else in the audience
21 here who is a lawyer who has legal experience who might
22 have that perspective. If we have a gas plant or a coal-
23 fired generating plant that puts SO_2 up in the air here, and
24 15 or 20 miles downwind we get the acid rain acidifying the
25 soil here, is it legally necessary to establish a positive
26 scientific connection with what happens in the air up here
27 in order to show cause and effect in legal nature so that



1 sulphur plants or coal-fired generating plants can be shown
2 to be legally responsible for that acid precipitation 15
3 miles downwind?

4 MRS. J. ROSCHLAUB: It is very difficult to prove these
5 kinds of things. In the United States, where you do hear
6 more about prosecution than you do here in Canada, for some
7 reason, six states started legal action against Ohio, which
8 has a very high rate of sulphur dioxide emission, and they
9 were not able to get anywhere because they couldn't prove
10 that those Ohio emissions were causing problems down in the
11 next state. In our British system of law, you are
12 considered innocent until you are proven guilty, so the onus
13 is on the person who thinks they have been damaged.

14 But, you know, I'm not a lawyer, so I would agree
15 with you, maybe there is a lawyer here who can shed some
16 light on that.

17 MRS. B. HUNTER: Is there anyone in the audience with
18 legal expertise? Yes, Dr. Bentley?

19 DR. F. BENTLEY: Fred Bentley; I just comment that
20 recent publication or news release from the U.S. National
21 Academy of Science says that conclusive proof is not at
22 hand, but the circumstantial evidence is overwhelming.

23 MRS. B. HUNTER: Thank you. Are there any other
24 questions?

25 MR. R. WHISTANCE-SMITH: My name is Ron Whistance-Smith.
26 One of the things we heard this morning was that something
27 like 30 percent of Canada's honey supply comes out of this



1 region, and we heard about the type of crops that are grown
2 in the region, and Judy has mentioned the type of crop
3 yields decreasing that we can expect from the acidification
4 of the soils in this area. I have heard the average PH of
5 the soil in this region is about 5.7. Alfalfa produces, or
6 fails to produce at something like 5.5, something like this,
7 and I think Dr. Bentley has told us at times in the past
8 that as the acidic deposition occurs, as the base level
9 drops, I think did you not say that it drops at an increasing
10 rate as we continue to get an acidic deposition of the soil?
11 That the thing not only is the scale logarithmic, but the
12 rate at which it drops also seems to be accelerating?

13 DR. F. BENTLEY: The buffer capacity is lower as the
14 PH gets lower.

15 MR. R. WHISTANCE-SMITH: So what I am getting at is the very
16 crops which let's say give us our honey production here in
17 the Peace River region, we're in danger of losing not only
18 those crops, but the honey production. So it seems to me to
19 be a very multi-faceted sort of a problem, and maybe you
20 would like to just comment on that. The economic impact on
21 this region seems to be absolutely enormous, and I think we
22 have got just like a time bomb just waiting to go off here.

23 MRS. J. ROSCHLAUB: Well, if they just develop the sweet
24 gas for awhile, we could still have our sweet honey for
25 awhile.

26 MRS. B. HUNTER: Do you have any other comments on
27 that, Joan?



1 DR. J. SNYDER: No.

2 MRS. B. HUNTER: Any other questions or comments?

3 MR. G. STEWART: My name is George Stewart with the
4 Non-Renewable Resources Committee, and I don't think I should
5 try and defend the sour gas industry; I don't think that
6 would be very fruitful. I might say that the industry is
7 certainly concerned with this whole question of acidity, and
8 there have been quite a number of studies undertaken and
9 proposed, quite a few by this Alberta Oil Sands Environmental
10 Study Group. Just recently, the Department of Environment
11 research secretariat proposed a major study of the problem,
12 proposed that to industry, and we are right now in the
13 process of working out the funding details, and we will
14 include people such as Calgary Power in the study. The
15 study is to be undertaken over, I think it will take, 5
16 years, and \$4 million spent in that study.

17 There are also a number of other studies that are
18 locally conducted. I work for Esso Resources at the Joffre
19 plant which Judy referred to. We have, I guess last year,
20 formed a committee of local farmers and local government
21 agricultural representatives and ERCB people to talk about
22 local problems such as corrosion of fencing and so forth,
23 and cattle problems and acidity problems, and in that
24 committee there has been other research proposed which we
25 are funding. So there are quite a few things that are going
26 on and quite a bit of concern being shown.

27 MRS. B. HUNTER: Thank you. Dr. Bentley?



1 DR. F. BENTLEY: Fred Bentley, again. I expect
2 people can hear me. They export about half a billion dollars
3 worth of sulphur from Canada - last year's figures. If we
4 are exporting a depletable resource so that we can have the
5 benefits now, I think we have an obligation to try and leave
6 some of the other resources for those to follow. We did hear
7 that there is work being done to ascertain the effects of
8 some of these things. I would propose that it would be quite
9 reasonable to have a 2 percent take, based on the value at
10 deep water, for research funding to ascertain where the
11 depositions are occurring. We don't really know from the
12 plume studies, that seem to go on unendingly, exactly where,
13 what area, to what extent it's being affected by the actual
14 deposition. There are many biological aspects and effects
15 that we do not know.

16 If we have the 2 percent of 500 million or whatever
17 the figure is, I think 10 years or 15 years from now, we'll
18 be in a very much better position and could take appropriate
19 measures to protect the environment on the basis of
20 knowledge rather than speculation.

21 MRS. B. HUNTER: Thank you. Are there any other
22 comments or questions?

23 MRS. J. ROSCHLAUB: I would like to make a comment to
24 the gentleman with Esso. We have found that some of the
25 studies financed entirely by the industry, the petroleum
26 industry, seem to whitewash the issue. That's not fair to
27 say that everybody would do that, but I'm thinking in



1 particular of studies done at Pincher Creek by Shell, and
2 you know, the summary said there were no problems. When we
3 talked to the young agrologist who had done the study, he
4 said yes and no, they didn't put in there that the hinges
5 rusted off on all our test plot gates.

6 MR. T. COTTRELL: Tom Cottrell with the Environment
7 Council. Has a request ever been made to an oil company
8 operating a gas plant to pay for the cost of liming the soil
9 in the downwind areas of the plant?

10 MRS. J. ROSCHLAUB: They say you prove to us that we're
11 doing you some damage, and we will be willing to make
12 restitution.

13 MRS. B. HUNTER: Any other questions? Well, I would
14 like to thank you both, ladies, for a most interesting
15 presentation. We thoroughly enjoyed it.

16 (APPLAUSE)

17 MRS. B. HUNTER: I would like to call on Alistair
18 Crerar to give the report of the Hazardous Wastes Management
19 Committee.

20 MR. A. CRERAR: Thank you, Betty. I remember that
21 one of the speakers this morning spoke of the pioneer spirit
22 in the Peace River, and when I think of the years you were
23 associated with the Peace River, 47, you must have come up
24 here as a baby.

25 Hazardous wastes; I am substituting for the
26 Chairman, Dr. Ralph Nursall, who was completely tied up.
27 I just want to review a bit of the history or background for



1 this. We released our report and recommendations on
2 hazardous waste management last January, but in fact we had
3 written in December, and the implementation team was in fact
4 formed last December. So it has been in operation for a
5 year.

6 They have been operating on a 14-stage or 14-step
7 program. In looking at the steps or stages, they are
8 presently at stage 13 or step 13, which is the selection of
9 a short list of sites.

10 The sites that I am aware of that they have on the
11 short list are in the County of Beaver, County of Flagstaff,
12 and around Josephburg in the County of Strathcona. These
13 are being investigated with drilling and so forth and so on.

14 The 14th step, which is the next one, is in fact
15 identified by them as the political selection process, that
16 is between the three different sites. So they are at a very
17 critical transition stage. You are down to the point where
18 the actual site is to be selected, and I think part of this
19 transition is that some of the methods that they have used
20 in the past to arrive at this stage have to change.

21 They have been operating on the basis of
22 generalities, essentially, and they now have to move towards
23 concrete details. There is a very basic reason for that;
24 you can not ask people to accept a general concept. You can
25 discuss a general concept in terms of getting down to, you
26 know, a short list, as they have done, but once you get
27 beyond that, when you are actually asking people that you



1 put it in their backyard, I think you have to become
2 specific.

3 In our report and recommendations from council, we
4 were quite specific in what we had in mind. We identified
5 the facilities required and we identified the levels of
6 safety to be reached, to be attempted, and to review them for
7 you, we thought that the plant should promise, guarantee in
8 fact, no discharges to surface water from any liquids that
9 fell on the surface of the plant site. No discharges to
10 ground water. Landfill we thought was not a treatment for
11 toxic waste, it is essentially a storage, and we saw
12 landfill as being used only for residuals from treatment,
13 nothing toxic should go to it.

14 If you do put toxic materials such as, for example,
15 asbestos wastes, then it should be encapsulated before it
16 goes into the landfill.

17 There were other features that we identified, that
18 it should have an incinerator, that it should have a
19 temperature of 1200 degrees Centigrade, that it should have
20 an afterburner, that it should have a scrubber. There is no
21 guarantee, no guarantee possible under those circumstances,
22 that you would not have a human error or perhaps even a
23 mechanical error, but the state of the art is such that that
24 is what you would have to face, but it should be minimized.

25 Now, when you get it down to specifics, you
26 probably could cut corners on every item that I mentioned.
27 A good accountant would say, well, why not use secure



1 landfill or a deep well disposal for direct disposal of
2 toxic wastes, it's cheaper, and by some definitions it is
3 safe. What we were looking towards is what was a
4 reasonable environmentally concerned citizen could endorse
5 as being the kind of facility that some citizens might have
6 to accept. That is the basic concept. If you're going to
7 ask somebody to accept this facility, to put it in his
8 backyard, you have to consider very carefully what it is
9 you're asking to accept, and build up to those standards,
10 and run it to those standards.

11 Council preference was that it in fact be accepted
12 and that is the process it has been going through. That if
13 it is not welcome, that at least it will be tolerated, but
14 if it had to be forced on people, it should be to the
15 standards that we identify, because you have to impose
16 something on people in that way because it is in the best
17 interests of all of us to have such a facility.

18 So we are just at this point where I think the
19 government has to identify what kind of facility it is, the
20 standard it is going to be developed to, to identify whether
21 they are going to cut corners, and particularly, what kind
22 of organization is going to run the thing. We suggested a
23 Crown corporation, not because we believe that Crown
24 corporations are particularly good things, in fact they
25 probably are inefficient, but when you ask someone whether
26 they want efficiency or safety, in this case the answer has
27 to be safety. Somebody has to go around and say that you



1 are working towards some kind of objective. If that
2 objective is to turn a profit, then the tendency is to cut
3 corners wherever you can; that is just as safe, that is just
4 as good, and it costs a lot less.

5 Well, usually you want that philosophy. That is
6 efficiency really if you can produce something that is just
7 as good with a lot less input, then that is economic
8 efficiency. But in the case of a hazardous waste treatment
9 facility, I think there has to be something that is not
10 imposing lower costs but higher safety. And I would not
11 argue that the kind of levels of treatment that we are
12 talking about are a minimum or that they are ridiculously
13 high, that we have got a belt and suspenders and we are also
14 holding it up with clothes pegs or something like that.
15 Perhaps we are, but that is the level that we panel members,
16 reasonably environmentally concerned people, felt was within
17 the capability of the technology, was reasonably economic,
18 but also provided the level of safety that satisfied us,
19 and that's all it can be.

20 We are at, I hope, the final stage in the selection
21 of a site for a hazardous waste plant. What is needed now
22 is a decision on what the facility is to be, how it is to be
23 operated, who is going to operate it. Six months ago I would
24 have said that we were far ahead of any other province in
25 Canada, particularly the kind of spectacle of Ontario having
26 chosen a site down in South Cayuga and they were running into
27 all kinds of problems. I think Ontario is probably now



1 ahead. They had rejected the South Cayuga site on very good
2 scientific grounds. The people that rejected it were in
3 fact the people that will operate the waste management
4 facility. The people that will operate that waste
5 management facility are now the ones that are going around
6 Ontario to look at alternative sites. If you know who
7 those people are going to be and what they're going to put
8 in and what they can stand in front of an audience and say,
9 we will operate to this standard and they are actually
10 living, breathing people, I think that is the point you have
11 to get to.

12 I think they are now, having slipped way behind and
13 done all kinds of wrong things, they have probably now got
14 into this sort of, I hope it's a race, and I hope we are
15 running hard.

16 I think that all of us here are concerned about
17 hazardous materials. I think all of us want to see such a
18 facility come on-stream as quickly as possible. I think
19 also we would want to have that facility, one which, if it
20 has to go in somebody's backyard, that we have done
21 everything that we can to ensure that it is a facility that
22 is not going to cause them problems, cause us problems, or
23 cause the environment problems.

24 Well, that is my report on where we stand with
25 that particular thing; if there is any questions, I would be
26 glad to answer them.

27 DR. G. GRIFFITHS: I wonder if you would hazard



1 commenting on the relative merits of the three sites? I
2 could comment to the effect that I am surprised at
3 Josephburg because that is the area of great agricultural
4 soil. Also, it is climatically less desirable than the
5 other two sites because the area immediately around Edmonton
6 does not have much potential for evaporating ponds and
7 lagoons. The excess of evaporation over precipitation is
8 quite low, in the order of 7 inches in a year, and there
9 are occasionally years in which there is in fact more
10 precipitation than evaporation. Looking at the vegetation,
11 my opinion is that there is the change of climate on the
12 east of Cooking Lake moraine and you get into a much
13 relatively drier climate. As you pass over the east end of
14 that moraine, you find that spruce forest is the vegetation
15 up to the east end of the Cooking Lake moraine; beyond that,
16 you do not see spruce trees growing naturally. Therefore,
17 from my point of view, I think the Flagstaff and Beaver
18 county locations would be preferable, if you're going to
19 have ponds to evaporate water out of some of this stuff.

20 MR. A. CRERAR: It almost sounds as if it is in your
21 backyard. Let me answer that one about evaporation; it is
22 kind of an important point, but I think it is off the point
23 in the sense that I would tend to downgrade evaporation as a
24 method of treatment. It is probably very safe, it is
25 certainly very cheap because you are using the dryness of
26 the air and so forth and so on, but I really and our panel
27 just did not feel that we would like to put some of those



1 materials into a lagoon to be picked up by the passing
2 breezes and supposedly that breeze knows that it should only
3 take water and it shouldn't take any of the other fractions
4 that might be there. But we just did not think that it was
5 a particularly -- we would downplay it as a particular
6 treatment element in the whole operation.

7 So evaporation still is probably useful because
8 there will be residual materials which are developed, but we
9 really thought of using deep well disposal for that kind of
10 thing. If you have something that is like a brine or
11 something like that that you could discharge to the surface
12 waters, if it was diluted, we felt that that kind of thing
13 could go down in a deep well. We don't like deep wells for
14 the disposal of toxic materials; it isn't treatment, it's
15 just storage. We do see that you could use it for getting
16 rid of excess water which is part of the residual.

17 The other part of it is, you know, Edmonton
18 produces 70 percent of the hazardous wastes that are produced
19 in this province; it is the industrial centre. The closer
20 you can get a site to Edmonton to the source of the waste,
21 the places that generate the waste, the less exposure you
22 will have to any transportation spills or problems, because
23 transportation spills really are a function of distance.
24 If you go 200 kilometres, you have twice the chance of a
25 spill occurring, all things being equal, as you would if you
26 went 100 kilometres. If you go 50 kilometres, you have
27 that again. It is a simple concept, a simple formula, but it



1 is true. So, if there are other reasons for Josephburg not
2 being acceptable, such as not a good clay base, or if it is
3 first-class land, sure, then it should be eliminated, but I
4 wouldn't have thought they would. That is some of the things
5 they have, in fact, been looking at.

6 MR. C. WOOD: Charlie Wood; maybe I missed something,
7 Alistair, when you were talking about costs. One of the
8 things that always concerns me, I read an article a little
9 while ago about people that were trying to run a hazardous
10 waste disposal facility in the United States; they were
11 charging the generator of the wastes a fairly large fee for
12 the use of their facilities. In a very short length of time,
13 the mafia came along, the midnight commandos, and offered a
14 much better service and they simply spread the stuff on the
15 ground or in the bushes or whatever. Now, this is a very
16 real problem. What sort of charges do you envisage these
17 generators of stuff being faced with?

18 MR. A. CRERAR: Well, I think there should be a
19 charge to the generator, because in fact a charge is an
20 incentive for him to treat it himself. If he could treat
21 it himself, that's usually a reasonably satisfactory kind
22 of operation, if he does not go to certain kinds of
23 treatment. For example, I don't think any generators
24 should be allowed to have a secure landfill on his property.
25 For the same reason that I don't think secure landfill is
26 good in a major plant, it isn't good for a generator or
27 petrochemical plant or whatever it may be. It is not



1 treatment, it is just storage for those kinds of things.
2 It is great for lettuce leaves and so forth, but it is not
3 for a wide range of hazardous wastes.

4 The other part of it, and you are right, you can
5 always undercut by taking the stuff from somebody and
6 trucking it off and spilling it off on the roads around
7 there or wherever it may be. All you have to do is find
8 some place that nobody is looking at you, and get rid of it,
9 and that is the cheapest way of disposing of it. You have
10 to control that, in fact, by some kind of manifest form.
11 That whenever you have waste to be transported you fill out
12 a form which, it is bureaucratic, but you really do have at
13 least three copies, one for yourself, one -- four, one for
14 the guy who is transporting it and one for the fellow that
15 receives it, and you also have to have one for the
16 government for them to check up on it. I don't know of any
17 other way of getting around it.

18 But you should have that kind of system in place.
19 It is going in place now. It is going in place now as part
20 of the dangerous goods, well, the one that is being
21 established now, to keep track of the movement of dangerous
22 goods, because hazardous wastes are in fact a subdivision
23 of dangerous goods.

24 MRS. B. HUNTER: One more question and then we must
25 break for lunch.

26 MR. G. PASCHEN: Gerry Paschen; what methodology was
27 applied when you chose the site? It is in the best



1 interests of Alberta to have these facilities.

2 MR. A. CRERAR: Well, the methodology that we
3 applied was this. We know, give or take 5 or 10 percent,
4 we know that we are presently generating something in the
5 order of a hundred thousand tons of waste that could be
6 classified as hazardous right now. We are generating that
7 month by month, year by year, and the amount is going up.
8 You just heard that four new petrochemical plants were
9 approved. There is an inevitability, we know that they are
10 going to produce hazardous wastes. We have no treatment
11 facilities in this province for hazardous wastes at all. We
12 have some storage facilities. Most of the things that we
13 know about go into the Clover Bar dump along with all the
14 domestic wastes from the City of Edmonton, or go into the
15 Forest Lawn dump with all the domestic wastes, or some of
16 the domestic wastes of Calgary, and we do not know what
17 happens to the rest of it. We don't know what happens to
18 the rest of it. I thought when we had our public hearings
19 that we would hear about somebody's waste dump. I keep
20 expecting to find somebody turning up some kind of waste
21 dump somewhere - it hasn't happened. It hasn't happened,
22 not because they don't exist, but because it just hasn't
23 come to anyone's attention, but they must exist somewhere;
24 they have been putting the stuff somewhere.

25 Well, your guess is as good as mine, but that is
26 what we are faced with. What do we do about it? We are
27 not going to stop the people that manufacture it at the



1 present time. In fact, we are going to increase it, so we
2 have to find some way of doing something reasonable with it.
3 MRS. B. HUNTER: Thank you, Alistair. I think maybe
4 we should break for lunch. Thank you, ladies and gentlemen,
5 you have been a good audience.

6 (LUNCHEON BREAK)

7 MR. BILL FLOOK: Mr. Chief Executive Officer,
8 distinguished speakers, honoured guests, ladies and
9 gentlemen, whenever one is invited to introduce a
10 distinguished speaker, it requires a commitment, a commitment
11 to do justice to the speaker, and this usually implies
12 trying to find out something nice that you can say about him.
13 In the case of our speaker today, the assignment was just
14 the opposite. On looking over or reviewing Fred Bentley's
15 career, one is literally overwhelmed with the amount of
16 material from which one has to choose.

17 Fred Bentley is recognized as an international
18 authority on soil science and agriculture. He is concerned
19 primarily with the area of agriculture education, research
20 and extension, and is involved in programs for expanding
21 food production in the developing nations.

22 He received degrees of B.Sc. in Agriculture and
23 his Master's in Science from the University of Alberta, and
24 his Ph.D. from the University of Minnesota. He's been a
25 faculty member of three universities, Minnesota,
26 Saskatchewan, and Alberta.

27 Fred has recently informed us that he can hardly



1 appear anywhere now without speaking to his former students.
2 I think the significant omission was Prince Edward Island.

3 He is the author and co-author of about 80
4 scientific papers, numerous speeches and addresses on radio
5 and T.V. He has been involved in a number of international
6 projects, and I will tell you of some of these.

7 He was the agricultural consultant in Sri Lanka
8 for the Colombo Plan and was an agricultural consultant in
9 Thailand for the food and agricultural organization of the
10 United Nations. He is the leader of the Canadian
11 Agricultural Task Force in India, he is an agricultural
12 consultant in India for the Ford Foundation. He's a member
13 of the Board of Governors and Executive Committee of the
14 International Development Research Centre. He is a member
15 and chairman of the governing board of the International
16 Crop Research Institute for the semi-arid countries, and
17 he is leader of two CIDA teams to Sri Lanka in 1979 and
18 1980.

19 I could go on for another ten minutes, but I am
20 sure you are duly impressed by now. I will suffice to say
21 that Fred is a Professor Emeritus in the Soil Sciences at
22 the University of Alberta, and one tends to think of a
23 Professor Emeritus as a professor who has ceased to function,
24 who has done his job, has been awarded the title and can now
25 go to bed. That isn't the case. The title Professor
26 Emeritus literally means in service to the end, a professor
27 in service to the end, and I do not know anyone who wears



1 this title more deservedly than Professor Emeritus Fred
2 Bentley. Fred?

3 DR. F. BENTLEY: Madame Chairperson, you-all, and
4 Bill, if you hadn't taken so much time for all that
5 malarkey, I would have a little more time to talk to you.

6 The topic that the program says, "The Future of
7 Agriculture in the Peace River Country," took me somewhat
8 by surprise when I saw it on paper, and I had intended and
9 I continue to intend to use some of my material for a lecture
10 series that I'm engaged in, and there are copies on the
11 table of some material that I'm going to cover initially
12 before I get to the substance of what I would like to say
13 relevant to this region.

14 What I am going to say is relative to things in
15 this region, may put me in the same category as a kind of
16 Beau Brummel casanova who was trying to press his attentions
17 on an attractive woman. He was not used to resistance such
18 as he was encountering, and so in some irritation he said,
19 "I'm so sorry to have bothered you, I thought you were my
20 mother," and she looked at him and responded quite promptly,
21 "I couldn't possibly be your mother, I'm married."

22 What I would like to do in the interests of saving
23 time is something I don't normally do, is just read a few
24 very brief succinct statements to summarize the essence of
25 each of the numbered items on the material that is on your
26 tables. With respect to Item Number 1, we can summarize by
27 saying very good and good agricultural land is very scarce



1 in Canada, being less than one-sixth of all land with any
2 agricultural capabilities.

3 Number 2, even when in the same district, it
4 requires two acres of CLI Class 4 land to give production
5 comparable to one acre of CLI Class 1 land.

6 With respect to Number 3, the combination of good
7 agricultural land and good climate is very scarce indeed in
8 Canada.

9 Number 4, even under utterly Utopian conditions
10 with full application of all known 1975 agricultural
11 technology applied universally to every acre in Canada even
12 marginally suited to aerable agriculture, we could only have
13 doubled approximately Canada's total agricultural production,
14 and that without any consideration of the costs of
15 production or of the needs for markets.

16 Number 5, there has been massive abandonment of
17 once farmed low quality lands in eastern Canada.

18 Number 6, since 1965, expansion of agriculture,
19 that is increases in agricultural farm land, in western
20 Canada, has almost stopped. Meanwhile, since 1965,
21 abandonment of low quality farm land in eastern Canada has
22 continued apace. In eastern Canada, some of the loss of
23 farm land is due to prime land being urbanized, but the
24 major portion is abandonment of inferior quality land.

25 Numbers 7 and 8, on the basis of net trade,
26 Canadian agricultural exports have shrunk marketedly since
27 1945 and are now less than 10 percent of total agriculture



1 production.

2 Number 9, on a net trade basis, only the prairie
3 provinces in Canada are now food self-sufficient.

4 Numbers 10 and 11, conversions of agricultural
5 land to other uses are significant, and in addition we need
6 to remember that most of the conversions are high quality
7 lands in areas of particularly favourable climate.

8 Numbers 12 and 13, under actual use as farm lands,
9 there have been two offsetting trends. There is
10 indisputedly documented deterioration of underuse, but that
11 trend for deterioration has so far been largely offset, in
12 some cases more than offset, by improved farming technology
13 such as greater use of fertilizers, better equipment, better
14 educated farmers and so forth.

15 Well, those are summary statements regarding some
16 aspects of our agricultural land resource, and what has been
17 happening to it under use. I would like to make two or three
18 more summary statements now.

19 For practical purposes, any land potentially suited
20 for arable agriculture that is not already in use is almost
21 exclusively only Class 4, of marginal suitability for arable
22 agriculture. These summary statements are at least as
23 applicable to the Peace River region as they are to the rest
24 of Canada.

25 Of the potential that is yet undeveloped land in
26 Canada, with suitability for arable agriculture, somewhere
27 between one-quarter and one-third of the total in Canada



1 is in the Peace River district, region. Ladies and
2 gentlemen, these statements are statements of fact that are
3 documented; they are not debatable. What is going to follow
4 now are some expressions of opinion, and they may generate
5 some differing views.

6 First of all, I would like to say that homesteading
7 as we have come to know and think of it is now something
8 that is passe, unless you have massive subsidies, and I
9 suggest that even so, it probably entails unfairnesses to
10 the people who are enticed into the modern version of
11 homesteading, because it means getting people into inferior
12 farming settings where they are, in most cases, stuck with
13 a subsistence type of living which provides them with an
14 inferior lifestyle compared to other Canadians. It means
15 that they are probably trapped there by the time they find
16 out what the situation is. Their investment of sweat and
17 of capital is such that it is very difficult for them to get
18 out without just taking massive losses.

19 I expect most of you have heard the recent reports
20 regarding Dr. Hugh Horner's consultant's report regarding
21 livestock situation in which it is recommended that there
22 be what he calls a pioneer 2 scheme that would see 10 million
23 acres almost exclusively or entirely in the Peace River
24 region that would be developed for agricultural purposes in
25 the next 10 years. On the basis of what we have heard this
26 morning, that is practically total development of the
27 agricultural land potential of the Peace River country, and



1 several times as rapid as was, for instance, recorded on the
2 films and slides we saw this morning.

3 Dr. Horner's report suggests with some modesty that
4 perhaps initially there would be a requirement of something
5 on the order of \$200 million of public treasury funds to
6 enable the development proposed, and most recently, the
7 Minister of Agriculture has been quoted as saying it would
8 probably entail \$500 million of the public treasury monies
9 to enable this development that is proposed. That figure is
10 out there somewhere between 50 and 60,000 a farm, not allowing
11 for any overruns. That is a fairly substantial subsidy.

12 Now I suggest, at least I am expressing the opinion,
13 that if that scheme proceeds and on schedule, that it is
14 likely to be both an economic and a social failure, and at
15 least for some people it may even be considered disastrous.
16 Well to come to the Peace River country and say such a thing
17 needs to have some justification, so I would like to justify
18 my expression of view that I have just made.

19 First of all, on the basis of having lived in this
20 region for three years, and on the basis of having ever since
21 then had an interest in seeing what has been happening and
22 reading about the reports, I think it is fair to say that for
23 the area that is proposed for development, almost every
24 uncertainty of farming would be greater than it is now for
25 the farmed areas of the region, and I am prepared to say that
26 even for the farm areas of this region, the uncertainties of
27 farming generally are greater than they are in most of the



1 rest of Alberta.

2 The climate of this region on the agricultural
3 climatic resource index basis is almost exclusively a rating
4 of one. Alberta as a whole rates 1.5. The soils or the land
5 capabilities are mostly Class 4, the locations are all at the
6 extremities of communication, the fringes of settlement. For
7 every input the farmer must acquire costs more, and whatever
8 products they have to sell markets at a somewhat lower price
9 than other places because of transportation costs to get it
10 out. We have heard this morning from Judy and others that
11 soils of this area have some problems. With more acid soils
12 here than elsewhere in western Canada, salinity and
13 associated soil characteristics are common in much of the
14 area, and the soils are predominantly gray lubisols, and
15 therefore soil fertility is a problem.

16 The provision of public and social services are
17 more costly than these kinds of settings, or from the point
18 of view of delivery, they are also more costly on a per
19 capita basis, and I suggest that as a consequence of our
20 cost consciousness, the actual quality of the public and
21 social services as a consequence in these kinds of settings
22 tends to be inferior. I just comment that the problems, for
23 example, in Northland School Division seem to be continuing,
24 which I suggest is somewhat of a reflection of these kinds
25 of problems.

26 Another reason for my unenthusiasm for this
27 proposal is that in Canada agriculture is still primarily a



1 boom and bust industry, and we have this week, as support
2 for that, the fact that the Alberta government has committed
3 up to \$136 million in support of the livestock industry to
4 try and save people from current prospects of ruin without
5 it.

6 The Advisory Committee of the Canadian Wheat Board
7 13 months ago had a very enthusiastic and promotional
8 forecast about our marketing of oil seeds and grain for
9 export from this country and, to date, the indications are
10 that optimism was not justified, either in the markets or
11 the prices.

12 I think that it is unfair to existing farmers to
13 embark on agriculture expansions of the kind proposed by
14 Horner's report, because those people would have the massive
15 subsidies that the report suggests, and I contend that those
16 people would then constitute unfair competition to the
17 farmers who are now farming, because they will be competing
18 with their products. But probably one of the most important
19 qualifications on this kind of expansion that I have is that
20 we literally have cheap food policy by governments in Canada,
21 and I suppose this is understandable when we recognize that
22 most Canadians are urban, and they therefore accept and
23 seemingly don't object to the activities and demands of
24 unions and their leaders, so that the people who are members
25 of unions have assured, stable incomes increasing, and with
26 unemployment insurance. And yet our contemporary Canadian
27 urbanite society is making a lot of noise in opposition to



1 marketing boards, assured income for farmers that would give
2 farmers equitable assured and stable incomes.

3 We have had the Economic Council of Canada, we
4 have had the Consumers Association, and some economists who
5 have been telling how the Canadian public is being ripped
6 off, according to them, to the extent of tens of millions of
7 dollars through some of the marketing boards. I suggest that
8 I haven't heard the same sources criticizing the fact that
9 the Canadian public is being ripped off probably to the extent
10 of billions of dollars by some of the provisions of union
11 activities, which they don't seem to object to.

12 Well, in any case, the farming, with its boom and
13 bust cycle, gives a lifestyle that is inferior to that
14 enjoyed by other Canadians, and as long as we have the boom
15 and bust cycle, I object to people being led into this kind
16 of lifestyle, because they face uncertainties of income,
17 the frustrations of climate and market, and the drudgery of
18 trying to farm either with high-cost financing or with lack
19 of capital or both.

20 Well, that is a pretty depressing and downgrading
21 sort of statement to date. Let me try and make some
22 positive suggestions. I would like to see the kinds of
23 monies that are being talked about used for what I would
24 propose would be much more constructive and more desirable
25 purposes in the long run. First of all, I think we could
26 put to great advantage substantial amounts of money into
27 programs designed and intended to halt and preferably



1 reverse the trend for the deterioration in the quality of
2 our agricultural lands under use.

3 To that end, we would need to have massive
4 programs of agricultural research far beyond the level, the
5 inadequate level of present agricultural research support.
6 Now I must commend Dr. Horner's report because it does
7 emphasize the need for research. It is needed, especially
8 in the Peace River country because there is nowhere else
9 that you have the same environment, the same soils and the
10 same problems. And the research done at Lethbridge doesn't
11 have much applicability out here.

12 In addition to the increase in research, we also
13 need to have the equivalent, in my view, in what they are
14 doing in Saskatchewan where they have now the so-called
15 farm lab program. The Government of Saskatchewan last year
16 authorized \$25 million over five years for programs that
17 are primarily taking the results of agricultural research
18 from the lab out onto the farm, and under the guidance of
19 the researchers, having the farmers actually test, validate
20 and demonstrate to be absolutely sure that these things do
21 work on the farm.

22 A month or so ago there was an article in the
23 Western Producer, for example, that there are 40 different
24 farms in Saskatchewan where each farmer has 80 acres that he
25 is going to farm as has been his style recently, and 80
26 acres that he is also going to farm by modified methods as
27 recommended by the people in the cropping and soil



1 management systems, and see how things compare.

2 The only problem with that is that the five-year
3 period is utterly inadequate, however, it is a great start.

4 One other aspect associated with the deterioration
5 of lands under use is that as two different writers have
6 recorded in the last year or so, what we have talked about
7 as soil conservation in North America, for now going on 50
8 years, can not overall be classified as actually having been
9 successful, because probably a majority overall of farmers
10 have perceived the soil conserving practices that have been
11 advocated as being things that cost them money, and they do
12 not see that in their lifetime they are likely to get an
13 economic return for the investments that are required. As a
14 consequence, probably a majority of farmers overall are not
15 following recommended soil conservation practices, soil
16 management practices, that would maintain the productivity
17 of their land as it must be maintained.

18 So, I would like to see programs of subsidies,
19 grants, incentives, assistance, and if you need it,
20 legislation, the intent of which would be to see that clearly
21 proven, clearly economic and worthwhile soil and crop
22 management practices would be followed. We're talking about
23 acid soils and acid rain, one thing that you could make the
24 assistance for liming very much greater than what it is.
25 You could have incentives or assistance programs for forage
26 crops and so forth.

27 Now, of course, someone will say that this is



1 using public monies for these kinds of things, and how do you
2 justify that? Well, I don't know how many of you have
3 footwear that was made in Canada. If you're wearing footwear
4 made in Canada, you probably contributed something on the
5 order of 30 percent of what you paid as a direct subsidy to
6 maintain and support the footwear manufacturing industry in
7 Canada. We accept this as being in the national interest.
8 There are umpteen other kinds of programs of support and
9 assistance that we finance through government for things that
10 are deemed in the national interest. I suggest that the
11 kind of thing I'm proposing here, to try and halt and
12 hopefully reverse the trend for land deterioration and its
13 inherent quality under use, to halt and reverse that is
14 clearly in the national interest and we can justify it on
15 that basis.

16 I should also like to see development and
17 improvement in incoming insurance and marketing board
18 provisions so as to ensure and stabilize farm incomes in a
19 way somewhat similar to that which other occupations in
20 Canada enjoy. Now, I don't want anyone to misunderstand me
21 and feel that I am inappropriately supporting any marketing
22 boards that are in fact executing rip-offs on Canadians.
23 If there are any marketing boards that are achieving
24 rip-offs on Canadians, surely we ought to have enough
25 ingenuity and perseverance to correct them, and not condemn
26 things that stabilize people's income because of a few bad
27 examples.



1 Well, that is a fairly extensive program of
2 activities that would be related to halting the
3 deterioration of land under use. I think also the second
4 kind of thing I would like to see, I would like to see funds
5 provided for what might be called wise land use policies so
6 as to prevent or minimize the unnecessary conversion of
7 quality agricultural lands to non-agricultural uses.

8 I met a former student coming in here at noon
9 today, and he asked, "Well, don't you get tired; you've been
10 talking about some of these things for a long time, and do
11 you see any hope?" And on this matter of unnecessary use of
12 quality agricultural lands for non-agricultural purposes, I
13 am delighted to be able to say that I am tremendously
14 encouraged by what has happened as far as my own experiences
15 are concerned in 1981. I have found more evidence of
16 concern from people having no direct association whatsoever
17 with agriculture about this in the last year than I have
18 altogether previously, and I have been concerned, as my
19 questioner knows, for more than a couple of decades about
20 this.

21 Just for an example, last week two ladies, council
22 women, came to my home; they were looking for assistance to
23 formulate a resolution to go from the Edmonton Council of
24 Women to the National Council of Women, and hopefully to the
25 Government of Canada. These are just a group of urban
26 ladies who are concerned about this. I have had quite a
27 large number of similar indications of an unprecedented



1 public concern about this this past year.

2 Well, perhaps although all my remarks will be
3 disappointing to people who think of the Peace River region
4 in expansive terms, especially in the agricultural sector,
5 I'm not opposed to agricultural expansion here if it is
6 unsubsidized and if it is self-sustaining on these new lands.
7 But until it can be self-sustaining, commercial, viable, I
8 would prefer to see our monies used to ensure that when we
9 do develop and use these lands, they will be productive, the
10 people concerned will have a satisfactory level of living,
11 and that this will thereby constitute protection for the
12 people concerned, who are my primary personal concern, and
13 perhaps the reason I am so exercised by this aspect.

14 When I lived in this region, I saw people brought
15 here as settlers under horrendous conditions, and they left
16 15 months later under even worse conditions, and I just do
17 not like to see people suffer as a consequence of unwise
18 land development.

19 But also this course of action will protect the
20 environment from unnecessary degradation, and will, in my
21 view, constitute wise options for the future generations.

22 DR. M. KOSTUCH: The time is running short, but we
23 will entertain a few questions before we return. Graham?

24 DR. G. GRIFFITHS: I am rather struck by the decreases
25 in Ontario and Quebec. Earlier today we were told of the
26 effect that acid rain would have on agricultural land
27 productivity, and are some of these losses of agricultural



1 land in essence due to the effect of acid rain?

2 DR. F. BENTLEY: I doubt that any of the abandonment
3 of the low quality lands is really due to acid rain. The
4 figure I have is about 60 percent of the increasing acidity
5 of soils in eastern Canada is attributable to the use of
6 nitrogenous fertilizers, and 40 percent is due to acid rain.
7 It may marginally be a factor, but most of the land being
8 abandoned was Class 4 and Class 5 to start with.

9 MR. G. DIXON: My wife told me to take my high
10 blood pressure pills with me because she was sure I would
11 need them. I'm a rancher from the Peace River country, and
12 some of the things that I disagree with, I come here with
13 very little income, I have built a ranch, I run a thousand
14 head of cattle. It is an individual operation, we don't
15 qualify for all these government subsidies that have to do
16 with community pasture and so on. We built that, we are in
17 debt, we are in debt a long ways. This country has got
18 potential that isn't being used; we have got a lot of good
19 soil here. I live— I'm not sure of my soil, 3 or 4 soil,
20 west of here; we have real Number 1 soil around Grande
21 Prairie that will compete with any place in western Canada
22 for growing grain. The agricultural industry, the cattle
23 industry is pushed to the outside edge because we can grow
24 grass on these soils that won't grow grain. The Peace River
25 country has a real potential here, and it is just being
26 tapped.

27 One thing you failed to quote is the amount of



1 money being spent on irrigation in southern Alberta in the
2 dry areas. How does that compare with some of the programs
3 to develop this country? Compare that. Basically,
4 agriculture is in serious problems now, but is that not
5 political; is it not the government's cheap food policy?
6 How about subsidizing your food processing industry; how much
7 money from Alberta was borrowed from the Heritage Trust Fund
8 and went to Quebec to build their hog industry? That's
9 politics; that's not otherwise.

10 But the boom and bust cycle, we have just seen a
11 boom and bust cycle of the oil industry here in Grande
12 Prairie in the gas field in particular. Those films we saw
13 this morning showed the housing situation in Grande Prairie
14 and so on; right now you can buy a house anywhere in Grande
15 Prairie. We have an industrial park on the west edge of
16 town, and I was told, I can't verify that, but I was told the
17 other day there is one business a week going bankrupt in the
18 last year. That is due to the oil industry and the boom and
19 bust cycle, but no one quotes the amount of money that went
20 into that oil industry.

21 I have other things here. On the leather industry,
22 you're quoting and wondering about how many are wearing shoes
23 processed in Canada. Now we are talking about politics. I
24 have a friend in Edmonton that is involved with a company
25 buying leather, cowhide, shipping them to Japan, being
26 manufactured into gloves and shoes and coming back here
27 cheaper than it can be produced here. Now I think that is



1 politics involved there. I can go into a lot more, but I
2 don't want to get started on this marketing board.

3 Why is the Alberta chicken industry under a
4 marketing board for a few years, the population of Alberta
5 has increased about 25 percent, the Alberta chicken
6 producers can not increase their quota and so eggs are being
7 shipped in from other provinces, yet we have the potential
8 here to grow them. That is politics; that is not a result
9 of agriculture not being able to produce.

10 DR. F. BENTLEY: This is what I say, I'm not sure
11 that any marketing board is having unreasonable adverse
12 effects on productivity, and are executing rip-offs on
13 consumers. If there are unreasonable things that do exist
14 under marketing board legislation, let us correct them.
15 My concern is that if we have the great cycle of up and down
16 in farm income, we can not have stable efficient agriculture,
17 because you keep forcing people out of the industry at
18 great loss, and ultimately the consumers have to pay for it.

19 With respect to what we can produce, yes, we can
20 produce, but what can we sell at a price that will give an
21 economic return to the farmers, and we are unable to find
22 purchasers for the quantities of grain that we have for sale
23 today at a price that the farmers are willing to accept.

24 I don't see the wisdom of developing more potential to have
25 more grain, either produced under irrigation in southern
26 Alberta or on new lands in the Peace River country, and to
27 take it out of Dr. Horner's report and put it into the



1 Canadian Wheat Board Advisory Committee of a year ago, they
2 were proposing that an increase of 16 million metric tons
3 for export a year, one-quarter of which would come from
4 the Peace River country. That would constitute about 160
5 million additional bushels to be produced and exported from
6 this country.

7 It would be possible to produce it, but if you
8 take into account the cost of production and what you can
9 sell it for, I just don't want to see people sold down the
10 river into getting sucked into something like that and
11 finding that they have had their lives ruined by being
12 misled. This is my real concern.

13 DR. M. KOSTUCH: One more quick question.

14 DR. I. TAYLOR: You didn't talk about the possible
15 solutions for those areas around the major cities. There
16 are, of course, several examples, currently operating in the
17 country, of government attempts to curtail the use of prime
18 agricultural farm land for urban expansion. Which of those
19 schemes in British Columbia, Saskatchewan, wherever, would
20 you see as being feasible proposals for Alberta?

21 DR. F. BENTLEY: The governments of British Columbia,
22 Quebec and Newfoundland have passed legislation, the intent
23 of which is to reserve, insofar as is reasonably practical
24 for continuing agricultural production, prime agricultural
25 land. The legislation in British Columbia was originally
26 passed by the Barrett government; the present government of
27 British Columbia has been nibbling away at that legislation.



1 And you shouldn't form too strong conclusions on the basis
2 of a brief visit to that province. But on the basis on what
3 I have heard while there, and what I have read in the last
4 year, it is my impression that there is now deep anger on the
5 part of a substantial part of the population of British
6 Columbia about the way the government is in effect evading
7 the spirit of the original legislation. I think that the
8 original legislation, with the provision of the land
9 commission, was good; it also had the income assurance
10 provision. Now the income assurance provision was subject to
11 some criticism. That doesn't criticize the principal, it
12 was just the detail as to how they were worked out. I think
13 as they were originally proposed and initially administered,
14 the B.C. type of legislation was good, and with appropriate
15 modifications based on now nearly 10 years of experience,
16 would be applicable to other places in Canada, too, and I
17 would like to see it in the other provinces of the country.

18 DR. M. KOSTUCH: I would like to call on Dr. Terry
19 Veeman, the Chairman of SAC, to give our appreciation.

20 DR. T. VEEMAN: Ladies and gentlemen, it is a real
21 pleasure on your behalf to thank Dr. Bentley for his
22 stimulating and provocative address. He is almost one of
23 us as a member of SAC. I accused Fred last night that he
24 seemed to be busier than ever, but he did assure me that he
25 has taken four weeks' vacation last year.

26 He also was disclaiming that we probably heard his
27 ideas before, but I'm sure this crowd doesn't mind a little



1 recycling.

2 I think Fred was being too modest, because
3 whenever Fred speaks he is always putting new ideas before us.
4 Many times we agree with them, and on occasion we disagree,
5 sometimes even violently. Dr. Bentley is just in the midst
6 of a major speaking tour on the Klinck lecture across
7 Canada. In that lecture, I'm sure he is reminding
8 Canadians about the problems associated with land use. I'm
9 sure his talk today provides a real challenge to us.
10 Clearly, in 1982, the ECA, PAC, SAC and so forth are going
11 to have to pay most attention, I think, to our upcoming
12 hearings on the Security of the Agricultural Land Base, and
13 I think Fred is probably best known in Canada as being the
14 academic concerned with agricultural land, and that concern
15 is brought into questions of soil quality and what we can do
16 about it.

17 Fred presented us with many ideas, and I'm sure
18 we're going to have much opportunity to debate this in the
19 next year. Please join me in thanking Fred for a very
20 stimulating talk.

21 (APPLAUSE)

22 MR. R. WHISTANCE-SMITH: I would like to launch the session
23 this afternoon with the introduction of Jerry Lickacz
24 speaking on roadside ditch erosion. Jerry farmed on the
25 family farm at Calmar, Alberta all his life. The farm is
26 a cow/calf feeder operation which comprises about 840
27 acres on which they grow cereal and oil seed and forage crops.



1 In 1971, Jerry graduated from the University of
2 Alberta with a Bachelor of Science degree in agriculture,
3 with a major in soils. In 1972, he started teaching soils
4 courses at Fairview College on a part-time basis, and that
5 has allowed him to continue the farming operation.

6 Jerry was instrumental in helping the Renewable
7 Resource Study Group in drafting its resolutions on roadside
8 ditch erosion and the possible methods of alleviating that
9 some, let's see, four years ago, and that has been a
10 continuing concern of his for some time. It gives me great
11 pleasure to introduce to you Jerry Lickacz.

12 MR. J. LICKACZ: Thank you, Ron. When I looked at
13 the program, I saw that I was supposed to be talking roadside
14 ditch erosion, and I would like to change that a little bit.
15 I think I am in an enviable position, because I can change
16 that at the present time and the organizing committee
17 doesn't have much opportunity to find another speaker.
18 Just in case any of you are thinking of leaving here and
19 going up to your rooms and having a little bit of a snooze
20 or something like that, I have instructed Betty to lock the
21 doors so nobody can leave until I finish. I like to look
22 at it as if I have a captive audience here.

23 My concern about soil erosion, part of which is
24 roadside ditch erosion, I like to look at the control of
25 this type of erosion being good land management practices,
26 good soil husbandry practices, and good road construction,
27 highway construction design principals; if they are



1 followed, the problem will be minimized. So what I would
2 like to do in my entire presentation, or most of my
3 presentation this afternoon, is deal with simply having a
4 commentary along with a series of slides which I'd like to
5 show you. So if I could please have the lights out now and
6 turn the projector on.

7 My feelings on the control of erosion or
8 reclamation of erosion should more appropriately we should
9 concentrate more of our efforts on the prevention of erosion,
10 and I guess it is the old expression that if you take care
11 of the pennies, the dollars will take care of themselves.
12 I think that can be applied very appropriately to soil
13 erosion.

14 There are several types of erosion, and not all of
15 which is bad. One of those we could refer to is called
16 natural erosion, and some people like to refer to it as
17 geological erosion, but it is the type of erosion that is
18 taking place over hundreds of thousands and millions of years
19 which has resulted in a large part of our drainage system
20 over the entire North American continent being created by
21 erosion.

22 Here we are looking at the Peace River Valley at
23 Dunvegan, and if it wasn't for this drainage system being in
24 existence, you would be inundated with water. We have to
25 have a drainage system to get rid of this excess water from
26 snowmelt, from excessive rainstorms during summer, that type
27 of thing.



1 Erosion also is kind of beautiful in certain
2 respects. Take a look at the badlands down at Drumheller,
3 Dinosaur Park; it is a tourist attraction. Not all erosion
4 is bad. This is what we refer to as natural or geological
5 erosion. The real problem is surface, and what we refer to
6 as accelerated erosion. When man first came into the area,
7 he started changing the system; he changed the vegetation
8 and started manipulating the environment to his own ends.
9 But this has created what we refer to as accelerated erosion.
10 Man comes into the area and he wanted a system of highways;
11 he needed some system of transportation, so the highways
12 were built. In certain instances, these highways are quite
13 elaborate, there is quite a lot of land out of production,
14 and at the same time the most critical is that construction
15 of these highways tends to alter the existing water drainage
16 system which nature has developed over the last 10,000 years
17 or so. So highway construction is very critical.

18 Railway construction also, I feel, has done an
19 awful lot to alter the drainage patterns to an area. As
20 soon as we start taking water out of the drainage system
21 that nature has designed, we are looking for problems, and
22 that's when we start resulting in accelerated erosion.

23 You have to look at some of the soils in the
24 Peace River region, and I don't think my comments would
25 differ at all if I was talking about soil erosion in central
26 Alberta, southern Alberta, or as a matter of fact, any place
27 in the agricultural areas of western Canada. Our soils here



1 in the Peace River region for the most part are what we
2 refer to as being developed from old lake bottoms. They are
3 quite flat, relatively fine texture, so they don't absorb
4 water all that rapidly, and it is very conducive to
5 accumulating large volumes of water in relatively few
6 drainage systems. So we have got a soil problem, and the
7 nature of the soils is one of the reasons why you tend to
8 have quite a problem up here.

9 The soil itself for the most part, as Dr. Bentley
10 indicated earlier, a lot of the soils have developed in the
11 tree vegetation, they tend to be what we refer to as gray
12 lubisol soils and are low in organic matter content, and
13 definitely particularly sensitive to erosion.

14 We do have — periodically nature doesn't help the
15 situation at all by having very large rainstorms during the
16 course of summer. This here particular rainstorm occurred
17 in the Grimshaw area this past summer where they received
18 about 4 inches of rain in an hour to an hour-and-a-half.
19 So we had tremendous amounts of run-off of water, and this
20 type of erosion you really can't control; it is an act of
21 God, and you really don't have that much control over it.

22 But you do have some control over maybe the more
23 erosion that takes place in a slower rain. I think a lot
24 of our farming practices up here tend to be very conducive
25 to accelerated erosion. Here is an example where we are
26 trying to bury all these surface cover, or all the trash
27 residue from the previous crop has all been worked into the



1 soil, leaving the soil bare, exposed to the wind and water
2 erosion. So this is a practice I think that we have to
3 discourage.

4 Here is another one - stubble burning. I think
5 nothing much more has to be said about it, other than saying
6 it's a tremendous loss of fertility out of the soil as well
7 as a loss of protective cover for the soil.

8 Two parts of erosion, wind and water erosion.
9 Wind erosion is not all that much of a problem up in the
10 northern areas; there are isolated locations where there is
11 some problems with wind erosion. But our biggest concern
12 is water up here. Estimates have been made that wind
13 erosion accounts for about 10 percent of the soil erosion,
14 water for about 90 percent.

15 I would just like to show a few slides on wind
16 erosion, and I think it can be quite safely said that all
17 of our erosion, both wind and water, occurs off of fields
18 which are summer fallowed the previous year, and the
19 problem of summer fallow, I think we could solve the problem
20 associated with too much land being left out of production
21 each year; I think we could control a lot of our wind and
22 water erosion, as well.

23 Here is just a final slide showing that maybe wind
24 erosion is a problem in certain areas where you lose a
25 tremendous amount of topsoil. But usually that is
26 associated almost entirely with summer fallow fields.

27 Our water erosion, on the other hand, is of



1 basically two forms. We get about 80 percent of our erosion
2 loss that takes place from spring run-off, and 20 percent or
3 so takes places from these heavy summer storms.

4 Now, like I indicated, summer fallow, as far as
5 I'm concerned, is the major cause of the erosion problem.
6 In the region we summer fallowed in maybe about 25 percent
7 of our acreage, and this is amazingly has been quite steady
8 over a good number of years. I think you could go back
9 about 20 years, as far back as data is available, and you
10 would see that 20, 25 percent is a very standard type of
11 acreage that is summer fallowed each year.

12 Also, it is estimated that 90 percent of the
13 erosion is occurring on summer fallow, so if we solve the
14 summer fallow problem, we have virtually solved our erosion
15 problem, for the most part.

16 Dr. Bentley made some reference, at least in the
17 printed material that he handed out, the effect of summer
18 fallow on salinization of the soils, and those who are from
19 southern Alberta are very familiar with salinization of the
20 soils occurring adjacent to irrigation canals and that type
21 of soil. Salinity is not that troublesome up in the Peace
22 region, but in very localized areas it is a cause for
23 concern amongst some of us.

24 Again, summer fallows, I can say, call for 25
25 percent of the land acreage each year, and another thing
26 that I have to question summer fallowing for is its waste
27 of energy. A gallon of diesel fuel is getting to cost



1 relatively expensive nowadays, and here is a perfect
2 example where a farmer has summer fallowed just for the
3 sake because he has nothing else to do. I think that that
4 explains a lot of the reason why so much land goes into
5 summer fallow; it's a tradition here. I have talked with
6 many farmers up here, students that I have got in class, and
7 they only summer fallow because grandfather summer fallowed.
8 Tradition is one of the biggest problems.

9 Also, the selection of the type of tillage
10 equipment that is being used extensively, the type of
11 machines like this double disc here, tends to pulverize the
12 soil and incorporate a much larger percentage of the trash
13 than is true with the cultivator that was on a previous
14 slide. Nonetheless, the type of tillage implements that are
15 used, along with other conservation practices that are not
16 used, winds up with a soil like this that is very
17 susceptible to erosion, no surface protective cover on the
18 soil because all the trash has been buried into the soil;
19 and these are the areas where we get our erosion problems.

20 Here is an example of some water erosion which
21 took place up in the Hines Creek area about three, four
22 years ago. Here we have got a gully. In the initial stages,
23 it probably washed out a foot or so in depth; this is the
24 most serious erosion, in my estimation, because it is the
25 type of erosion a farmer can work across and visually when
26 you drive by in your vehicles, it doesn't seem like there's
27 any serious damage having been done. Visually you have



1 levelled it out, but next year if you get a similar type of
2 erosion occurring and the year after that, you may have some
3 very serious problems with a very great gully forming across
4 the field.

5 Some other problems associated with the erosion on
6 summer fallowed land is the accumulation of the sediments in
7 the highway ditches, and this is a highway ditch just east of
8 Fairview, and you can see there must be at least 6 inches of
9 sediment that has been washed into the ditch. This concerns
10 me from a number of standpoints.

11 First of all, it concerns me from the standpoint
12 that there is a considerable amount of soil and consequently
13 a lot of fertility lost off the field itself, and sometime
14 sooner or later it will be filled up to the point where the
15 water flow is going to be directed out onto the field
16 because the ditch is full of dirt. At that time, the farmer
17 is going to complain. Somebody, in all likelihood highways
18 or municipalities, are going to send road patrols or
19 something like that in to clean the ditches out, and that
20 will solve the problem. But, also, I think you have to
21 consider who is going to pay for that. It is you and me,
22 the taxpayers, that have to pay for that type of reclamation.
23 So, in my opinion, you can prevent the problem much better
24 than trying to reclaim the damage that is resulting from it.

25 Here is an example of a roadside ditch just along
26 southwest of Fairview, and you have got a tremendous amount
27 of water flowing not in the ditch but parallel to the ditch



1 on a summer fallowed field. From the colour of the water
2 you can see a tremendous amount of soil material having been
3 removed from the field.

4 Here's an example where man tries to alter the
5 water run a little bit, and here's an example where a farmer
6 just set two bales of straw on the edge of the field to try
7 to direct the water, instead of flowing out onto his field,
8 forcing it down into the roadside ditch. What happened was
9 the water backed up and flowed around the bales and still
10 went out across the field. By this time, the velocity of the
11 water was increased to such a point that there is a
12 tremendous erosion potential because the water was flowing
13 so fast.

14 Here is an example where a problem is not
15 recognized early, and another problem develops. Here we
16 have got a roadside gully ; having been developed, it becomes
17 an inconvenience to the farmer because he can no longer farm
18 across it, and so it concerns him. But his concern has
19 been realized much too late to really do anything about the
20 problem.

21 Getting back to I guess the topic I'm supposed to
22 be on, this road construction, and periodically I have to
23 make a few comments about that so the organizing committee
24 doesn't feel cheated. Anyhow, so many of the roads that are
25 built in the region, and this can be said of roads in all
26 parts of the province, particularly in situations like this
27 where the soil is very sensitive to erosion in the first



1 place. You have got a long, gentle slope to the land, you
2 have got soil that is very highly erodible, and in these
3 types of situations you tend to run into a lot of problems.
4 So much of the problem is road construction. If it was
5 taken into consideration in the planning of roads, I think we
6 could eliminate a lot of these problems.

7 Here is an example of some erosion northwest of
8 Falher, or northeast of Falher, I should say, where the
9 government, and I assume the Department of Environment Water
10 Resources were involved in this, here's a situation where a
11 water drainage project was initiated. The one problem is,
12 though, that they started their drainage project in a water-
13 shed area, they started working downstream, and you can see
14 from just this is the first year after completion, or
15 supposedly after completion, in this area, that after one
16 year of run-off we have a substantial amount of erosion.
17 This was a very expensive drainage project that was built.
18 You have the drop structure here in the foreground. You have
19 relatively large culverts being installed, so a lot of
20 money has been spent. The ditches that were built were of
21 a good flat-bottom design, which is what we recommend, but
22 the problem started to run afoul a little further
23 downstream; we started to see where you are accumulating all
24 this water into the drainage ditch. You can see the
25 tremendous slumping on the edge of the ditch, and eventually
26 it cut the road, but here the problem is starting to develop.

27 Here is another slide just a little further on



1 downstream. In the foreground here you can see much more
2 extensive slumping or undercutting of the road surface, and
3 here at the mouth of one of the culverts the previous year,
4 a truck must have dropped in a load of rock at the mouth of
5 the culvert. That had the effect of holding up the flow of
6 water through the culvert. So what happened, the sediment
7 settled out and the culvert was virtually half filled in
8 with dirt. This is a situation where I think it is kind of
9 negligence, maybe, neglect on certain people's part, but I
10 don't think any one individual can be blamed; it is probably
11 a combination of a number of people involved in the planning,
12 the actual construction. Just maybe neglect in certain
13 areas of soil and water, and they are starting to get some
14 problems developing.

15 So what happened is they ran out of time in the
16 fall, and so they just built a massive drainage system, like
17 I say, from the watershed area downstream and they just quit.
18 What happened is the entire field on the left side of the
19 road, there is about a half section of land which is -- a
20 student told me got flooded out. The farmers on that side
21 started complaining to the municipality who hauled in a Cat;
22 they broke the road open to get the water going. Well, you
23 can recall some of the culverts that were installed, those
24 flat-bottom culverts, and they were about 3 feet in diameter.
25 Well, across the road there they had about an 18-inch
26 culvert, so that you can understand why the water had to
27 back up. On the other side of the road, you had a drainage



1 ditch looking something like that, and there just wasn't
2 the capacity in this ditch to carry all the water coming
3 down on the other side of the road.

4 So what happened when they opened up the road,
5 that solved the problem for the farmers on the one side of
6 the road, and created problems for the farmers on the other
7 side. You can see where the high water mark on these
8 granaries were. These were full of barley and the farmer
9 had to get the grain out of the bins while the bins were
10 sitting in water, and what I was told happened was the
11 farmer floated himself across on an inner tube from a
12 tractor tire. He got himself in the granary and his
13 neighbours they shoved an auger across the ditch full of
14 water, and they augered the grain directly out onto trucks
15 that were on the road.

16 That is some of the problems associated with poor
17 planning, in my estimation, and that same problem also
18 wound up with washing the railway out between Rycroft and
19 Donnelly.

20 Getting back to these roads here that are being
21 built, one of the problems that I see is with the existing
22 road allowance which has been surveyed which is 66 feet in
23 width; there is not enough land to create a ditch, to build
24 a ditch, which is resistant to erosion. Here is a perfect
25 example of a road which was rebuilt in the Fairview area
26 sometime this summer, and we see a flat-bottom ditch, and
27 that is the last thing we want. If we can get an expanded



1 road allowance which would allow for a flat-bottom ditch,
2 we can eliminate a lot of the problems. Hopefully, we
3 wouldn't get something like this a few years down the road.
4 I think if we could get an expanded road right away where
5 we could get a good sloping shoulder to the road, a good
6 slope back up to field level, I think the farmers might be
7 a little bit more encouraged to harvest the forage off
8 those ditches and get a little bit of production out of
9 them.

10 Here is a bit of an example of what I'm talking
11 about. This is the roadside ditches just in front of my
12 own farm, and we have tried in the past to take the hay off
13 out of the ditch just for aesthetic purposes; it just looks
14 nicer. But it is kind of a losing battle, because it is
15 very difficult; you're working in extreme angles and slopes,
16 and the danger of upsetting is always there, so all we have
17 done this year is we just cut the ditch in front of the
18 farmstead, and the remaining ditch downstream we just have
19 to leave it. But I think when new roads are being built,
20 we should encourage them to seek a wider road allowance, and
21 get a flat-bottom ditch, and I think we will eliminate a lot
22 of our problems.

23 Here's an example of a highway ditch between the
24 Number 2 Highway between Edmonton and Calgary where a
25 tremendous amount of land has been taken out of production,
26 and it is just a negative thing. It is a liability to
27 ourselves as taxpayers to send fleets of tractors with



1 mowers to cut these roadside ditches during the summer.
2 I have to give a little bit of credit to the Department of
3 Transport this year where they have allowed farmers to get
4 permits to hay-off the hay in these highway ditches. It is
5 a step in the right direction. I think, though, that we
6 have to change our construction techniques to encourage
7 removal of the hay out of these ditches.

8 Another example where we had ditches that would
9 be more conducive to farmers going there and taking the hay
10 out, they wouldn't have to send construction crews in to
11 trim the bush underneath power lines as was done this year
12 in this particular strip of bush alongside a power line. I
13 think there is a lot of other benefits that would result
14 from maybe a little better road construction and design.

15 Here is also an example, it is hard to see from
16 the back, but it's the roadside spraying of the brush in
17 the ditch could then be eliminated, and I think we are going
18 to have a presentation later on in the afternoon talking
19 about roadside spraying. But if we could eliminate this
20 type of thing, too, by better road construction.

21 Reclamation, I think, is very expensive. Here is
22 a road ditch in the Fairview area. I used to take the
23 students here to study soil profiles; when I went to go this
24 summer, I found out my nice classic soil profile had all
25 been filled in. The municipality had hauled in a bunch of
26 dirt and filled in this washout which had been approximately
27 20 feet in depth. So there is a tremendous amount of cost



1 associated with this, but there has been no effort made
2 whatsoever to reseed the ditch down to prevent further
3 erosion. There we are starting with just a little bit of
4 snowmelt that resulted from maybe this couple of inches of
5 snow which had fallen early in the fall, and you can see
6 that there is quite a little washout developing. It is maybe
7 only 6 or 8 inches deep now, but it will be interesting to
8 see what is going to happen next spring in this area.

9 Here is another example of a roadside ditch which
10 was about a half a mile in length which was washed out to
11 about 3 feet or so from the entire half mile. This summer
12 they filled that thing in, as well, so a tremendous cost,
13 but no effort made to prevent the cause, no effort made
14 whatsoever to seed the ditch down to some type of grass.

15 Here in this one particular situation, the
16 Fairview municipality went in and hauled in a bunch of
17 gravel into the ditch. However, with this run-off water from
18 just one stream, most of the gravel has been washed out. As
19 you can see here, it washes out to about 3 feet deep or so,
20 and this gravel was deposited downstream. Lots of the
21 water slowed down and eventually made its way down to a
22 little draw flowing through some of the adjacent farm land.
23 A tremendous waste of money there.

24 Maybe a little bit of food for thought, I guess,
25 is with the increasing acreage of land that is being farmed
26 in the region, we are breaking a lot of land, and I think
27 that we have to or should encourage government, by whatever



1 way possible to maybe get a little bit of rationale or
2 logic into the way farm land is being opened up. Dr. Bentley
3 made some reference to that this afternoon, but I would like
4 to see the land opened up, maybe not opening up such broad
5 expanses of land where you can go for miles and miles
6 without ever running into fence lines or little bits of
7 bush or anything like that, but I think it is nice to farm
8 in a certain respect. But I think we lose a little bit in
9 the aesthetic value of the countryside, and this is where
10 the erosion problems become very critical, very serious.
11 The use of shelter belts, I think, is very important and a
12 very good tool for erosion control. I made a similar
13 presentation to the Annual Conference of the Improvement
14 Districts at Peace River here about three weeks ago, and
15 one of the comments that came up was that accumulating snow
16 in the roadside ditches more than anything creates erosion.
17 I think in this particular situation you have got an example
18 where a shelter belt just off the edge of the ditch can be
19 used to trap the snow before it gets into the ditch, and
20 keep the ditch open for the conduction of water the following
21 spring. I think if we could set up or have a system of
22 shelter belts throughout the area which would prevent that
23 snow from drifting in the first place, where it falls we'll
24 leave it stay there, I think we could increase our moisture
25 levels in our soil, and I think by such means we could
26 increase the amount of property in the region, and at the
27 same time reduce the amount of summer fallow that we have.



1 I think that you have to admit that these shelter
2 belts between farms, or between fields on our farm, make the
3 area look quite attractive. It supplies a habitat for
4 wildlife, birds and this type of thing. I think it adds
5 something to the area.

6 Where major drainage projects are being constructed,
7 the one that comes to mind is the one I showed you in the
8 Falher area; I think we have to insist that the ditches be
9 flat-bottomed, not V-shaped. I think they have to be big
10 enough to handle the water volumes, and I think most
11 important, they have to be seeded down immediately. At
12 this Improvement District Council Meeting that I was at in
13 Peace River, one of the council members indicated that they
14 had approached the Department of Highways on this saying
15 that if you build a road, why don't you seed it down. The
16 Highways response to them was, well, what are you going to
17 do? You know, if we do the road construction, do the seeding
18 down, what are your responsibilities? So I think this is
19 a bit of a problem with trying to pass the buck from one
20 department to another department within -- people within
21 the department passing the buck.

22 Here is an example of a good drainage ditch being
23 built east of Fairview, a relatively flat-bottom, quite
24 steep shoulders, as you can see, so that it may not be good
25 in that respect, but they did have quite a few drop
26 structures made just simply by dropping rock into the ditch
27 to slow down the flow of water and trap any soil particles



1 which would be picked up by the water. Where drop structures
2 are necessary, I think that engineering has to be such that
3 it is capable of conducting that water with a minimum of
4 erosion.

5 I think we have got to look at a little bit of
6 increased research into the use of forages in the Peace
7 River region, and I think this also applies to other areas
8 of western Canada as well, that we have to cut back on the
9 summer fallowing on acreage considerably. I see in the
10 increase in forages in the cropping pattern of farmers is
11 very important, increases in energy costs, the use of
12 legumes, or in this case clover for its nitrogen-fixing
13 potential, or else seed crops, whatever, or however we're
14 going to use this crop, I think we can eliminate several of
15 the problems, we can cut down on the fertilizer requirements,
16 therefore our dependence on energy. We can also get or
17 minimize our erosion problems at the same time. Increasing
18 use of grass, although they are not nitrogen-fixing plants,
19 but they do have a very logical alternative to summer
20 fallowing. And in the Peace River region, creeping red
21 fescue production is a major crop; I would like to see more
22 of it being planted in the area.

23 I think that the Soil Conservation Act that has
24 been passed by the Provincial Government a good number of
25 years ago, I think it is a good Act, but I don't think it is
26 being emphasized as being enforced as much as possible. I
27 think we're dealing here with a social problem. Most of our,



1 under the Soil Conservation Act, it is indicated that an
2 agricultural or soil conservation officer has to be appointed
3 and in most instances it ends up being the ag-fieldman, and
4 he does not like going around the country telling farmers
5 what they are doing wrong, or telling even their own road
6 construction crews what they're doing wrong, because he has
7 to live in that community. So it is a social problem. If
8 he is raising too many waves, he is going to be isolated in
9 his community, so that is a fundamental problem that
10 somehow has to be addressed in the policing of this Soil
11 Conservation Act.

12 If I can just have the lights for a minute, I
13 would just like to make a few concluding remarks, and then
14 we can proceed with the rest of the program. I would just
15 like to summarize my points by saying that the soils in the
16 Peace River Region are such that they are very prone to
17 erosion where we are high in clay content, and consequently
18 they are very prone to erosion. The subsoils, also being
19 high in clay content, do not provide good drainage for our
20 soils, and consequently the amount or the puddling of
21 surface run-off of water is a major problem.

22 We do have these intense summer storms in the
23 Grimshaw area, and couple these intense summer storms with
24 the low organic matter, we find that the soil is very
25 erodible. I think man's activities such as road
26 construction, railway construction, have done an awful lot
27 to alter the drainage pattern of the area which nature has



1 developed or built up over the years, and wherever we try
2 to outdo nature, try to do something better than what
3 nature has done, we tend to get burnt quite often, and I
4 think you could probably say we always get burnt in that
5 type of situation.

6 A lot of the erosion is also associated with so
7 much of our farming land in the region, being in very close
8 proximity to the Peace and Smokey Rivers, and a lot of
9 these rivers are losing elevation, dropping the land surface
10 and the riverbed about eight hundred or one thousand feet,
11 so we have got a tremendous drop in water in relatively
12 short distances, and that creates a bit of a problem.

13 Our current farming practices such as summer
14 fallowing, stubble burning and our soil tillage practices,
15 also do contribute to the problem in the area.

16 As far as control is concerned, this is where we
17 got into a little bit of a discussion at lunch time when we
18 were talking about the development of 10 million acres of
19 land as Dr. Horner suggested. I would suggest that that
20 tends to be a political decision, and I guess we can
21 influence political decisions through our election process.
22 But I think we should be insisting that the government,
23 before they do any wholesale clearing of land up in the
24 region, that they first take an inventory of the land that
25 is available for development. If the land is not capable
26 of being used for forage production, let's leave it in its
27 natural virgin state. Let's leave it for a wildlife



1 habitat, water storage system, it can be used for
2 recreation, but I don't think necessarily just because there
3 is a bunch of land, we should go and open it up for
4 agriculture. I do, though, agree that a lot of the soils up
5 here can be developed for agriculture, and I guess this is
6 an area where Dr. Bentley and me disagree a little bit to
7 some extent. I think that a lot of these lands that are not
8 capable of sustaining aerable culture for barley, wheat,
9 rape and that type of thing, I think they are very capable
10 to be used for forage production. So I think there could be
11 an increase in population of livestock in the area. But
12 before we start doing some wholesale land clearing, let's
13 take a look at what we have.

14 If we are going to be doing some of this land
15 clearing, let's try to retain the natural vegetation and the
16 water runs, and let's keep the natural vegetation for a
17 distance of at least 50 feet, and preferably maybe 100 or
18 300 feet away back from the edge of the drainage pattern,
19 so that we can stabilize these water courses.

20 I would also suggest that where land is going to
21 be developed in large blocks, that land should be pre-planned
22 into viable farming or viable ranching units. I think if
23 we do this, we can have a situation established where we
24 can say these are where the primary roads, or these are
25 where the roads are going to be, these are where the
26 highways are going to be; the farmers have to set up their
27 farmsteads adjacent to those areas. I think it is pointless



1 to have a road going in an east-west direction to have a
2 road every one mile, going in a north-south direction to
3 have roads every two miles. There is a tremendous amount of
4 land taken out of production. I just calculated this
5 morning, in a township we lose 432 acres for each road
6 allowance.

7 Also, I think that if we pre-plan these areas,
8 dispose of them in viable units, we can minimize the cost
9 of road construction. Because we don't need the roads, we
10 can minimize the cost of telephone lines, power installations;
11 I think we can develop those areas at a minimum cost.

12 I would suggest that in a lot of the existing
13 agricultural areas within the province, that land is going
14 to develop at a maximum cost.

15 When I was preparing this paper, I approached the
16 Department of Transportation just to get some idea in the
17 province how many miles of highways there are of either
18 primary or secondary highways so that I could have some
19 estimate of how many acres of land are taken out of
20 production. Also to impress upon you the importance that I
21 feel that highways do have in altering the water patterns
22 in the area. I wasn't able to get any data on how many
23 miles or acres of land that are taken out of production for
24 highway construction, but I was eventually referred to the
25 Resource Economics Branch in the Department of Agriculture,
26 and there is a fellow there who has just completed the
27 project where he tried to determine the amount of land taken



1 out of production for highways in 1976 through to 1980
2 time period, inclusive. Their calculations have found that
3 25,076 acres have been taken out of production for such
4 things as road widening, new roads being constructed, new
5 highways being built, and maintaining stockpiles for areas
6 that are stockpiling gravel, that type of thing. So I think
7 we could pre-plan some of these large developments which
8 may occur in the future, and I think we can minimize some of
9 our erosion problems.

10 Also, the use of shelter belts, I think that is a
11 very integral part of any soil management in the developing
12 areas. I think in areas where we have got erosion problems,
13 we should look at establishing shelter belts where they have
14 been removed in previous years.

15 I think we have to encourage conservation
16 practices such as minimum tillage, possibly zero tillage.
17 We have to somehow or other reduce acres in summer fallow
18 which may necessitate increasing our forage acreage. We
19 also need increased research into nitrogen-fixing to
20 accomplish maybe some of this reduction in summer fallow and
21 also to be able to eliminate some of our dependence on
22 fossil fuels as an energy source.

23 I think on soils that are susceptible to erosion,
24 I think we also have to look at building roads that are
25 designed with erosion control in mind, and here I would
26 suggest that flat-bottomed ditches, sloping shoulders onto
27 the road, and not back onto the field which would facilitate



1 hay removal by farmers, and ultimately seeding down into
2 grass to stabilize.

3 In conclusion, all I would like to say is that in
4 my estimation most of the erosion control, or the erosion
5 problem in the region in western Canada, a lot of it is due
6 to negligence, neglect, poor farming practices, poor road
7 construction practices, and I think that if we can change
8 some of these practices, we will eliminate a lot of the
9 erosion problems in the future. Thank you.

10 (APPLAUSE)

11 MR. R. WHISTANCE-SMITH: Our next speaker this afternoon, Mr.
12 Pat Seymour, will speak to us on destroying an irreplaceable
13 heritage and its vegetation control in roadside ditches.

14 Pat is a commercial nurseryman; he bred roses in
15 Ireland, and following that, the Royal Botanic Gardens in
16 Edinburgh. He came to Canada in 1955, and told me sometime
17 ago it was put to him that he was not going to get ahead
18 very much in university without a degree, so he took a
19 Bachelor of Science degree in geography at the University of
20 Alberta.

21 Pat is currently the Director of the University of
22 Alberta Devonian Botanic Gardens, which covers an area of
23 190 acres. It is located west of Edmonton on the Devon
24 Highway. He is mainly concerned with increasing the range
25 of what will grow in the Edmonton region of Alberta. Pat?

26 MR. P. SEYMOUR: Like the previous speaker, it may
27 be possible I may deviate slightly from the original title



1 because like many people I have a bee in my bonnet. My
2 particular bee in the bonnet concerns endangered species,
3 which is a worldwide concern with the loss of irreplaceable
4 vegetation. So hence the original title, while I was asked
5 to talk about spraying in ditches, I have changed that
6 around to Destroying an Irreplaceable Heritage.

7 For many years I have been watching with alarm
8 and despondency what I will call the continuous greening of
9 Alberta's roadsides through the blanket, irresponsible mass
10 spraying with chemical weed killers, although in all
11 fairness I have to admit that there are, hopefully not were,
12 a few areas in Alberta which do not have blanket spraying.
13 This judgment is made on the basis of some magnificent
14 seasonal displays of wild flowers. I have included railway
15 allowances along with roadside verges because they, too, are
16 among the last refuges for certain of our wildflowers of our
17 irreplaceable heritage.

18 I use the word "irresponsible" to describe this
19 policy very deliberately. Surely it is irresponsible to
20 destroy plants which form part of a gene pool. Now a gene
21 pool, you have to have at least 50 or 60 plants of a certain
22 species before you can collect enough seed off that species
23 to have a gene pool to maintain that species in cultivation.

24 Even in a province the size of Alberta, certain
25 plants could easily be pushed towards near extinction.
26 Surely it is irresponsible to destroy plants that are a part
27 of our heritage, and which furthermore could be built up



1 into a wonderful tourist attraction.

2 These roadside flowers provide a natural gene pool;
3 they are the source of many horticultural plants widely
4 grown in gardens. Here I would like to quote from an English
5 book called "The Native Garden."

6 "A moral question crops up here and one
7 over which I am something of a heretic.
8 There is a large and respectable opinion
9 against the digging of any wild plants at
10 all. There are, I believe, only three
 important flowers which have become rare
 or extinct through the action of predatory
 gardeners - commercial enterprise has done
 worse damage."

11 Remember, he is talking about the United Kingdom, not about
12 conditions here.

13 "The damage has been done by draining,
14 burning and plowing. More than once
15 I have come across an enticing plant
16 on the roadside and nobly refrained
17 from taking a piece, only to come back
18 to find the whole colony smothered to
19 death by a heap of bituminous gravel,
 or in another case, the farmer innocently
 scattered a selective weed killer and
 hundreds of wild orchids were destroyed;
 rarely have I seen a spectacle so horrid
 as that of those beautiful plants writhing
 in the coiled deformity of poisoned death."

20 Beautiful English. Now, these orchids are one of the
21 endangered species in the world; there are very few of them
22 are left. They are protected by law against international
23 trading; they are not protected here.

24 How many of you present here today can remember
25 the time when cyprideium, that is the botanical name for the
26 yellow ladies slipper orchids, were common along roadsides
27 and railway banks? I've only been here some 26 years and



1 that same orchid has all but vanished. At one time there
2 were colonies of hundreds around Edmonton, now no more. A
3 few may have found their way into gardens, but the vast
4 majority perished under a policy of blanket spraying and
5 massive highway widening.

6 Now there are in other parts of Canada what are
7 called rescue operations, that if a road is about to be
8 widened or a new subdivision is going in, the various garden
9 clubs in B.C. will go and rescue plants and tame these plants
10 in cultivation, and possibly see about putting them back in
11 the wild. Incidentally, in the United States, there are
12 many nurserymen who fell so-called wild flowers. One, they
13 actually manage to grow the plants themselves from seed and
14 propagate them, and the other go out into the wild and lift
15 massive amounts of wild plants and sell them in their
16 catalogues. There is a black list of these nurserymen
17 existing in the American Botanic Garden Association. So
18 anytime you see these beautiful wild flowers advertisements,
19 please let me know and I will tell you whether or not it is
20 on the black list.

21 With the enormous destruction of wild plants now
22 going on, and particularly the destruction of tropical
23 forests in the Amazon Basin, the gene pool of wild plants
24 is slowly but surely decreasing in both quantity of plants
25 and numbers of genera and species.

26 In Alberta, the last refuge of many prairie
27 species in cultivated regions are the roadside verges and



1 railway banks. A case in point for the greening of Alberta
2 is Highway 23 north of Lethbridge. I have driven it many
3 times, always with the hope that I might see some prairie
4 plants, but no, mile after mile of cultivated fields with
5 only the old Canada thistle to relieve the monotony. To
6 offset this, I offer you two roads that have never failed to
7 provide me with a display. The first is from Mountain View
8 to near Pincher Creek, the second is Highway 22 from
9 Longview to Lundbreck.

10 Lest you come to the conclusion that I am solely
11 talking on an emotional level, let me quote from News Letter
12 Number 9 of Plant Gene Resource of Canada. This quote deals
13 with a wild barley collecting expedition in 1980 in Mexico
14 and the U.S.A.

15 "The party covered 26,000 kilometres
16 collecting *Hordeum* species en route
17 and studying a number of naturally-
18 occurring hybrid populations which
19 should prove very useful in elucidating
20 the taxonomy and cytogenetics of the
21 genist. A three-day side trip from
22 Mexico City to the highlands of
23 Guatemala in search of a little known
24 barley proved arduous but unsuccessful
25 for Dr. Von Bothmer. Apparently changing
26 agricultural practices are having an effect
27 on the native flora of even this remote
region. This was also observed in the
intensely cultivated southwestern U.S.A.,
where the plowing and spraying of roadsides
and banks of irrigation ditches are
eliminating much of the regional vegetation."

25 In other words, the gene pool material is vanishing right
26 across the southwestern U.S.A. This quote only refers to
27 one cereal crop. If the wild stocks of this are vanishing,



1 then at the same time wild stocks of other valuable gene
2 pool plants are likewise vanishing at the same time. So
3 how do we know just what important gene pools are being
4 obliterated by spraying?

5 As I said earlier, despite Alberta's size, given
6 the area under cultivation and the areas indiscriminantly
7 being sprayed, the plants along side roads and railways
8 are vanishing fast. There were far more flowers along
9 these places in the late '50's than now. Incidentally, I
10 well remember when I first arrived in 1955, my landlady who
11 had arrived about 1890, telling me about the fields around
12 Edmonton that what when she first came were red with
13 prairie lillies. Now you have to drive nearly to Jasper to
14 see them.

15 With the development of super highways, the older,
16 flowered road verges have gone. With the present policy of
17 revegetating cuts and roadsides with grass, wild plants have
18 a hard time getting re-established, though it does happen in
19 some places. Surely it is feasible, given present-day
20 technology, to revegetate the highways with native herbaceous
21 plants and grasses. Think what a tourist attraction it
22 would be to have our highways displayed with colourful
23 native plants. You might say, then, it might cause accidents,
24 but at the same time, people would slow down a bit more and
25 not use so much gas. A few roads do this, but these are
26 mainly secondary routes. Other countries do it in other
27 ways, as I will show you shortly.



1 This concept of wild flower lined highways is all
2 very well, but immediately somebody is going to say, what
3 about noxious weeds? Well, let us first define a weed. A
4 weed is only a plant which is out of place - usually it is
5 a plant which has existed quite quietly in its native
6 habitat. It is then introduced to a new situation and it
7 multiplies rapidly. A good example is the Ox eye daisy or
8 Tansey, which is now lining the highway practically from
9 Edmonton to Jasper. Sometimes it is a matter of a deliberate
10 introduction of a plant as an agricultural crop; here fit
11 alfalfa and sweet clover, both dreadful garden weeds. But
12 the worst weeds we have at the Botanic Garden, you try and
13 take a piece of alfalfa out from an alpine garden, it is
14 murder. Both of these, however, have a high aesthetic value
15 on highways as well as being cut by farmers.

16 But, take, say, dandelions and Canada thistle -
17 both pernicious noxious weeds. At present they have to be
18 sprayed chemically but surely blanket indiscriminant
19 spraying is not necessary to control these and other noxious
20 weeds. I have frequently seen mile after mile of dull green
21 grass heavy with the scent of 2-4D, while just inside the
22 fields are patches of hearty thistles. It would seem to be
23 that the farmer gets -- sorry, I wrote something in here
24 this morning and I can't read it. Sorry.

25 This brings me to an alternative method of control
26 - biological control. Recently I drove from Penticton to
27 Princeton. There I saw a large sign describing a method of



1 biological control that was being used against a weed
2 infestation in that area. The particular weed there is the
3 Centaurea species which has many other names. Apparently
4 it has overwhelmed that southern part of the country. There
5 they have introduced a particular species of insect which
6 feeds on this plant and gradually eliminates it.

7 Possibly the most famous biological control
8 program was in Australia. I here quote from Noxious Weeds
9 of Victoria by Parsons.

10 "The plant concerned is Opuntia Stricta
11 - prickly pear. It occurred near
12 Sydney prior to 1839 as a food plant
for cochineal insects and as a hedge."

13 Cochineal, by the way, for those who have ever done any
14 cooking, is the red colouring which is used to colour icing
15 and cakes; it is the dead bodies of insects maserated.

16 "The Opuntia had infested 10 million acres
17 by 1900 and 58 million acres by 1920.
18 An idea of the density of this cactus
19 infestation may be got from the fact that
it produced a bulk of 500 to 800 tons per
acre.

20 The control of erect prickly pear in northern
21 New South Wales and southern Queensland is
22 the world's outstanding example of biological
23 control of a weed. In 1920, the Commonwealth
24 Prickly Pear Board, representing the Commonwealth
25 of Australia and the governments of Queensland
26 and New South Wales, was established to attempt
27 control by introducing natural enemies of the
pear to Australia. Entomologists collected
about 150 species of insects which fed on
prickly pear in North, Central and South
America and 12 of these were introduced to
Australia. These were released after thorough
testing to ensure that they would not become
pests on desirable plants. Of these 12
species, only two, Cactoblastis cactorum from



1 Argentina and Uruguay, and a cochineal
2 insect, provided effective control
under Australian conditions.

3 Cactoblastis was first introduced in
4 1926 and by 1932 most of the plants
5 had been killed in the worst affected
6 areas. The caterpillar of cactoblastis
7 tunnels into the segments and stems,
8 reducing them to a rotting mass. The
outstanding success of this insect
in such a short period ranks with the
amazing spread of the weed in the early
part of the century as a spectacular
biological phenomenon.

9 Erect prickly pear has not been eliminated
10 by cactoblastis, as scattered plants still
11 occur over much of the original area, but
12 most of these are now infested with insects,
so a balance has been reached where there
is now a very low level of both plants and
insects."

13 Given this success, and others, is it not time that more
14 money should be invested in biological control research
15 studies?

16 Before turning to some slides, a further comment
17 on gene pool. Southwest Australia has an enormous native
18 flora; many are still not described. Frequently strips of
19 uncultivated native bush have been left along the roads.
20 In Australia, you drive along the roads and you get this
21 nice strip between the road and the cultivated fields.
22 There is low fences, no weeds, just native bush. In many
23 cases, these are the last refuge of many endemic species.
24 Endemic means species only found in that particular area and
25 nowhere else. The flowers there are so extensive that there
26 are organized wild flower tours. I here quote from Flowers
27 and Plants of Western Australia.



1 "Pastoral, agricultural, mining and
2 even forestry activities, all take
3 their toll of native flora. In
4 recent years since tourism has become
5 a major industry, a demand has grown
6 for illustrated books on wild flowers
7 to guide a traveller to areas where
8 they may be seen, and to enable him to
9 name the plants. The saddening progressive
10 loss of wild flowers along the roadsides
11 may mean that in the future the flora
12 reserves and national parks will be the
13 only places where wild flowers may be
14 seen. It should be noted that in
15 Australia the picking of all native
16 flowers is prohibited on all Crown lands,
17 state forests, public reserves and roadsides
18 in the southwest and Eucla Land Division.
19 Permits which allow picking in certain
20 circumstances may be obtained from the
21 Department of Fisheries and Wildlife."

22 One would almost think that it is time that further
23 legislation was introduced into Alberta.

24 Now I turn to some slides. The first one is
25 obviously not in Canada but is the only slide I could find
26 which is similar to the greening of Alberta. I would say
27 this is the greening of Queensland. In that particular
case, there is just grass along the road, then sugarcane.

Queensland is a vast agricultural area, and not
very much interested in things aesthetic.

This was along the road going towards the Kline
River, just short of the Kline River David Thompson Resort.
And when I was driving through there early this summer, I
noticed that the roadside ditch was quite green, and then
you have got this 12 to 20 foot strip of what looked like
oil that has been sprayed along the grass. Under it the
grass looked all right, but the rest of it looked pretty



1 lousy. So I am just wondering what they're up to along
2 that road, and extending right along the bank of Abraham
3 Lake. Does anybody know and has seen this happening, they
4 can tell me afterwards, because it has destroyed the flowers
5 along there. That highway is a particularly good one for
6 looking at wild plants. If you just move in, just above
7 that strip and the vegetation remains untouched. There is
8 Oxytropis, a massive display of it clear along that highway
9 from the start of Abraham right into the national parks. It
10 is a wonderful place to see these wild flowers, and lo and
11 behold that strip of oil is there. I walked up through it,
12 there wasn't much smell to it, so I wasn't very sure.

13 This is right on the edge of the forest reserve
14 road about Red Deer crossing. A fantastic wild flower
15 display, no spraying has been done; it comes right up to the
16 end of the road, and that is a sheer mass of colour for a
17 good stretch of time in the summer.

18 One of the close-ups of the Dodecatheon or
19 shooting star, a very valuable garden plant; who knows what
20 other uses could be found for something like that.

21 Chain Lakes, near Chain Lakes on Highway 22. This
22 is a Rosa Arkansana, not the flower emblem. These roses I
23 have seen sprayed out of existence. It is so much ironic
24 that in the display this morning on the Peace River you had
25 a photograph of a wild rose alongside a road. In just a
26 few years' time, that may not be there because of the
27 spraying that goes on, and this, too, will become an



1 endangered species. This particular rose is lucky in that
2 it can grow and flower from ground level. It's not a true
3 shrub; it puts suckers up that bloom each year. There is a
4 close-up of it; beautiful flower. They say roses haven't
5 much value; one of the chief sources of Vitamin C during
6 World War Two came from rose hips.

7 This is Highway 22 again, I think just north of
8 the Chain Lakes. Good vegetation along there. I suspect
9 the portion behind the man standing there has been sprayed,
10 and the best colour is up on the lakes just behind it.
11 Remember that when you spray this, you are not only
12 destroying valuable gene pool material, but you are also
13 destroying beneficial insects.

14 This plant is Monarda; it just looks like another
15 weed, but again, I should quote you from the Plant Gene
16 Resource Bulletin, and the heading was, "Monarda Provides
17 Valuable Oil Used in Soaps."

18 "The Monarda, a perennial plant first
19 developed as an ornamental for southern
20 Manitoba and known by a variety of names
21 including Bee Balm, Fragrant Balm, Oswego
22 Tea, Horse Mint and Wild Sage, has been
23 found rich in fragrant oils that are used
24 as a base in soaps. A spice company in
25 the United States has shown an interest
26 in Manitoba varieties of the plant. The
27 plants, several varieties of which now are
being propagated and sold by some prairie
nurserymen for ornamental purposes, contain
high levels of an oil called geraniol. One
hybrid developed by Dr. Henry Marshall, an
ornamentals specialist at the Morden
Research Station, contains more than 90
percent geraniol, the highest level known
in a natural state."



1 So you see these plants along the roadside have their uses
2 in the gene pool and possibly for eventual commercial
3 exportation.

4 This is the true wild geranium; this is no
5 relation to your house plant, by the way. I never miss
6 the opportunity to belabour this one because the house plant
7 that you grow, it's proper name is apellagonium and not
8 geranium at all.

9 This is just north of Cochrane, right along the
10 roadside; acres upon acres of colour. No spraying has been
11 seen along that road yet.

12 One of the Gaillardia or blanket flowers, a
13 close-up of that area. Loco weeds, bell flowers, many
14 things, tremendous asset along these country roads.

15 This is a similar type of road on the Forestry
16 Research Road northwest of Cochrane. Again, no spraying;
17 I have been going there for 25 years, and I see that same
18 display each year.

19 This is south of Marble Canyon in Kootenay
20 National Park. That is an example of a weed that has gone
21 wild. It looks very nice, but I have mixed feelings about
22 it. That is the Ox eye daisy, the same plant which has
23 spread very rapidly along the roadside between Jasper and
24 Edmonton, and that is a good case in point, I think, of
25 something which should be developed by biological control.

26 Now this is the glacier lily within a few feet of
27 the road at Bow Summit. Again, no spraying has been done.



1 Most people don't see this; they don't stop their car to just
2 look at the roadside verge, but they do exist up there, and
3 again no spraying as yet. They will become an endangered
4 species very shortly; there is not much of it left.

5 Now to move down south into California, clear
6 along the road, mile after mile of wonderful tourist
7 attraction with unsprayed highways. That is just the
8 Californian poppy growing as it should do, and little lily
9 plants, calochortus, again by the acre, alongside the roads
10 in a township just north of San Francisco.

11 Another plant called Brodiaea, acres along the
12 roadside, unsprayed. That is near the mission of St.
13 Anthony of Padua south of San Francisco in the foothills.
14 I have to admit that that comes right down to the road, no
15 spraying, but the real reason that the flowers are still
16 there is because it is a military reserve, and they are
17 really protected. There are no cattle on the reserve, and
18 the result is that it is a wonderful area.

19 Now a different approach, we as yet, I do not
20 think, in Alberta, have done any highway plantings. Now
21 in Los Angeles they do massive amounts of highway plantings
22 with various plants as an alternate to using grass. The
23 various forms of ground cover which have been developed
24 specifically for that region, they use Mesembreanthemums
25 by the ton along the freeways in Los Angeles. Things like
26 ivy, many of them.

27 Now there is an example of a plant developed



1 specifically for use as a ground cover along highways. It
2 is a plant from South Africa; it is in a non-seeding form
3 in California; it couldn't possibly become a weed. Why
4 can't we develop similar type things.

5 Now we will skip to Australia. There at the
6 roadway, a very sandy strip, and the cultivated land starts
7 over beyond, and this is the source, as I said before, of
8 a massive number of wild plants. Many of these have never
9 even been described. Now you can see again I am standing
10 on the road, there is that wide strip and then the fields
11 beyond it. It is a very sensible means of having preserved
12 their vegetation. I didn't observe any noxious weeds in all
13 this strip that I looked at; it was just native material
14 like this and these and this. A sheer mass of colour. I
15 have never seen such colour anywhere in the world as I've seen
16 in southwestern Australia in the spring.

17 Then again, even on the forested roads, this is
18 a eucalyptus forest, they have not sprayed the roadside
19 verges. As a result, you get mimosa and various other
20 plants growing right along the roads.

21 This is their endangered orchid, of which they have
22 many, a thing called Cowslip orchid which grows widely
23 throughout western Australia. Again, these are protected;
24 you can not pick them. There are so few of them left in
25 certain places.

26 Here is the other side of the coin; this is a
27 plant which was introduced in Australia, no doubt by



1 homesick settlers, called Pattersons Curse. I couldn't
2 resist putting it in; it makes a lovely show, but it is a
3 noxious weed. I believe that in times of famine, sheep will
4 eat it, but only if it is a famine food. It reminds me of
5 some of the plants that you read about that the native
6 peoples of Alberta use, and frequently at the end of the
7 sentence in the book it says, "Famine food." So that got
8 away; again, they have no biological control for this. When
9 I was there, I didn't hear of anything that was being
10 developed.

11 Here is the other side of the coin; I showed you
12 the plant from South Africa in Los Angeles; this is a non-
13 seeding form. This is the seeding form which is now a
14 noxious weed in pasture in western Australia. It goes on
15 for mile after mile after mile. It has choked out native
16 plants; that is the other side where they really need
17 biological control.

18 A couple of the plants of the southern prairies,
19 you know, get out of your car sometime and look along the
20 roadside verge in southern Alberta; there is massive amounts
21 of beautiful things to look at.

22 Now a final slide I put in; it is not a roadside
23 plant, but it is one of the rarest and most beautiful
24 orchids in Alberta. It is endangered. Every time a road
25 goes through a forested region, Edson region up to the
26 mountains, it is destroyed. I don't know, it appalls me
27 the amount of destruction of wild flowers that goes on.



1 So I would like to end with one final plea that a
2 fresh look be taken at the use and abuse of chemical weed
3 killers in Alberta with the object of conserving both gene
4 pools and our fast-vanishing, irreplaceable floral heritage.
5 Thank you.

6 (APPLAUSE)

7 MR. R. WHISTANCE-SMITH: Are there any questions of Pat?

8 DR. G. GRIFFITHS: I am very pleased with this
9 presentation. I think part of the problem has been that
10 these weed killers have been sold so cheap, and hopefully
11 as the prices rise, so will the cost of weed killers, and if
12 we can prevent the government from subsidizing the use of
13 weed killers by the municipalities, the problem will solve
14 itself. They will go back to mechanical means of preventing
15 woody vegetation growing along the roadside.

16 I wonder also if we should emphasize the
17 ecological fact. The plants which are noxious weeds on land
18 just under cultivation are plants which are colonists of
19 disturbed ground, and what you're doing is you have noxious
20 weeds along the roadside and you spray it with something
21 that kills those weeds is perpetuating the situation.
22 Because what will grow there after the spraying are the same
23 weeds, colonies of bare ground, and you are preventing by
24 that kind of stragety, vegetational succession, the
25 development of perennial vegetation which would replace the
26 noxious weeds if you left it alone, or just treated it
27 mechanically. I don't think the people who ordinarily spray



1 understand that they are perpetuating the situation.

2 MR. P. SEYMOUR: Frequently the plants, the thistle
3 is moving back onto the verge at the edge of the field, but
4 the fields aren't getting sprayed, in some cases, before a
5 farmer jumps on me.

6 DR. T. VEEMAN: Do we actually have an endangered
7 species list for plants in the province?

8 MR. P. SEYMOUR: There is; Ottawa has put out a book
9 for each province on the, not necessarily the endangered
10 species, but the species that they think might become
11 endangered. These are published in Ottawa and edited by
12 George Argason (Phonetic) of Ottawa. They go to Alberta,
13 B.C. and some of the Maritimes; Canada hasn't been covered
14 completely yet. But there is an endangered species
15 convention which does prohibit international trade in plants
16 collected in the wild. Plants under cultivation can be
17 traded from country to country, but not if they are picked in
18 the wild.

19 MR. R. WHISTANCE-SMITH: I would just like to ask here whether
20 or not on some of this newly constructed roadside, these
21 roadsides that Jerry pointed to could be seeded down
22 successfully so that some of the species you mentioned would
23 form a solid enough ground cover to prevent erosion.

24 MR. P. SEYMOUR: I would like to see it done. I
25 don't know that anybody is doing it. It would require a lot
26 of research, a lot of time, but as far as I am aware, it is
27 not happening yet. It would be nice to see it done, though.



1 MR. R. WHISTANCE-SMITH: Would Jerry like to respond to that?

2 MR. J. LICKACZ: No, I would not.

3 MR. R. WHISTANCE-SMITH: You wouldn't like to respond, or you
4 would not like to see wild flowers? Okay, are there any
5 other questions?

6 MR. T. COTTRELL: Has there not been an increase
7 recently in the interest of using natural vegetation for
8 regeneration and for erosion control on pipelines and cut
9 areas and roadsides and so on?

10 MR. P. SEYMOUR: There has been quite a bit done for
11 railways and some of the cutbacks in the mountains. I
12 haven't seen it done on any highways. We are doing, I know,
13 some research station work experimentally for the damsites
14 in Alberta. But as yet, I have heard nobody do it for
15 highways.

16 MR. G. DIXSON: I should congratulate the oil
17 companies in this area; they are doing a real good job of
18 seeding down cut lines and new roads in our particular area
19 here. It is not just one company, it's four or five
20 companies, and they're doing a real good job.

21 MR. R. WHISTANCE-SMITH: If there are not any other questions,
22 I would like to congratulate the last two speakers for
23 getting us back on time. At the beginning of this session
24 we were 15 minutes behind, and we are right back on. Thank
25 you again, very, very much, both of you.

26 (APPLAUSE)

27 MR. R. WHISTANCE-SMITH: We will now break for coffee and



1 come back here in 15 minutes.

2 (REFRESHMENT BREAK)

3 MR. R. RICHARDSON: We will proceed with the first
4 resolution. If I appear nervous, I'm really not; it is
5 merely nicotine withdrawal symptoms caused by Martha's
6 resolution.

7 Resolutions are a major function of PAC, and
8 their purpose, of course, is an attempt to influence
9 government policy. I would like first to introduce the
10 Resolution Committee for this year, and to thank my fellow
11 members for their cooperation and invaluable assistance.

12 The first one is Mr. Gordon Cameron, who wasn't
13 able to be with us today; Graham Norman; and Ridley Shaw.
14 I would also like to thank the study groups for the quality
15 of their resolutions this year that they submitted to us.
16 The format and quality was much improved over the past
17 couple of years, and made the work of the Resolutions
18 Committee much easier. I'd like to thank Bill Flook and
19 his researchers, as well, for their comments on the
20 background information.

21 Before we start, I would like to just cover a few
22 of the rules for any of the new people here that we sort of
23 operate under. The first one is that I'm going to take all
24 the resolutions from each study group in the order listed in
25 the resolutions package, with one exception. Secondly, the
26 study group chairmen, I am going to ask them to read their
27 resolutions, to move it, and then we would require a



1 seconded from the floor. If you want to second a
2 resolution, please identify yourself for the benefit of our
3 reporter before you second it. Of course, all resolutions
4 must be seconded before discussion begins. Anyone wishing
5 to speak to a resolution, again, we ask that you identify
6 yourself before you give your remarks, and please keep your
7 remarks to a maximum of two minutes because we are somewhat
8 strapped for time.

9 Any amendments that may be brought forward must be
10 properly moved and seconded, and again, before -- must be
11 done before discussion. Resolutions require a simple
12 majority to pass, and lastly, no resolutions will be
13 accepted from the floor.

14 Okay, the first resolution. Martha?

15 DR. M. KOSTUCH: I have a question from a member of
16 the public. Can any non-PAC member speak to the
17 resolutions?

18 MR. R. RICHARDSON: They would speak to the resolutions,
19 but not vote on it.

20 The first resolution is from the Environment
21 Protection Study Group, and Graham Griffiths will read the
22 resolution, and the first one being the use of poisons for
23 predator control.

24 -----
25 RESOLUTION 1 MOVED BY DR. GRAHAM GRIFFITHS, SECONDED BY
26 DR. GUY SWINNERTON.
27 -----

26 MR. G. DIXON: I am new on this committee, so you
27 have to forgive me if I have to ask a few questions. You



1 seem mainly opposed to 1080. What is your opinion to using
2 strychnine?

3 DR. G. GRIFFITHS: The resolution is not opposed to the
4 use of strychnine where predator control is indeed necessary
5 to remove problem coyotes.

6 MR. G. DIXSON: As I understand you correctly,
7 farmers can not -- are not restricted to use 1080 or
8 strychnine, if handled by your agricultural predator control
9 man and your fish and wildlife control man; can I be
10 corrected on that?

11 DR. G. GRIFFITHS: They can issue these baits to other
12 people, to a farmer. The farmer can not obtain them without
13 approval, but they may receive it from the government
14 personnel.

15 MR. G. DIXSON: When you talk about something like
16 this, do you have a solution for controlling some of our
17 problem wildlife, other than poison, that you can suggest
18 back to the government?

19 DR. G. GRIFFITHS: No, the resolution is concerned with
20 minimizing the use of problems, but recognizes that it can
21 not be entirely eliminated. You can, of course, shoot
22 coyotes and that is the alternative approach.

23 MR. L. HALFE: My name is Louie Halfe; I represent
24 the Trappers Association, and even though this resolution
25 did not come from the renewable resources section, we would
26 like to go on record as supporting the resolution.

27 DR. G. GRIFFITHS: Thank you very much.



- 1 MR. R. RICHARDSON: Any more comments or questions? If
2 not, all in favour?
3 (SHOW OF HANDS)
4 Contrary, if any?
5 (RESOLUTION CARRIED)
6 The second motion is private land for recreational
7 use.
8 RESOLUTION 2 MOVED BY DR. G. GRIFFITHS, SECONDED BY DR. GUY
9 SWINNERTON
10 MR. R. RICHARDSON: Any discussion? All in favour?
11 (SHOW OF HANDS)
12 Contrary?
13 (MOTION CARRIED)
14 MR. R. RICHARDSON: Resolution 3, agricultural research
15 in Alberta.
16 RESOLUTION 3 MOVED BY DR. G. GRIFFITHS, SECONDED BY GRAHAM
17 NORMAN
18 MR. R. RICHARDSON: Any comments or discussion?
19 MR. A. WIRENGA: Andy Wirenga, Renewable Resources.
20 I would like to comment that I think it would be appropriate
21 that included in the background that there should be an
22 emphasis on northern development in light of what we have
23 heard this past number of hours.
24 MR. R. RICHARDSON: Graham, do you have a comment to
25 that?
26 DR. G. GRIFFITHS: The future terms of reference do
27 include a specific reference to northern development. You



1 are asking for an insertion in the background note not
2 affecting the resolution, as such. It favours one part of
3 the province over another, and I am personally not convinced
4 that that is necessary. I'm not sure how to handle it, as
5 it affects the background note and not the resolution itself.

6 MR. R. RICHARDSON: I don't think normally we are
7 discussing background, we are discussing the resolution.
8 I think probably the resolution would suffer by inserting
9 something like this into a certain specific area, because
10 we are trying -- it is trying to be made applicable to the
11 whole Province of Alberta.

12 MR. M. MUC: Mike Muc, Pollution Study Group. I
13 think that this is a very weak resolution because it can be
14 vaguely and widely interpreted. If I simply were to
15 suggest that I will maintain a review of the sort of
16 research, that would suffice. I think what you are looking
17 for is financial longterm stability and a provision for
18 this. So therefore, if that is the direction that you are
19 trying or addressing your statement to, then I think that
20 some word with respect to financiers should be included, and
21 that would prevent any sort of ambiguity and possible sort
22 of indirect reply to this saying we are meeting the
23 requirements in the resolution.

24 MR. R. RICHARDSON: Would you like to move an amendment
25 to put that word in?

26 MR. M. MUC: Yes, I will certainly move that the
27 Alberta Government provide for the longterm financial



1 stability of the extra-mural agricultural research effort
2 in Alberta, so that just provides an additional term.

3 MR. R. RICHARDSON: Do you have any comments, Graham?

4 DR. M. KOSTUCH: You need a seconder.

5 MR. J. SHEMANCHUK: I second that amendment.

6 MR. BILL FLOOK: Mr. Chairman, may I suggest that
7 instead of longterm financial stability which could be
8 provided for by other means than introducing money, you say
9 that the Alberta Government provide financial support for.

10 MR. M. MUC: Yes, that's fine.

11 MR. R. RICHARDSON: Any comments?

12 MR. M. MUC: I think, as Bill has pointed out,
13 we should also have in the last sentence of that provincial
14 support, so that it would also have a financial inclusion
15 in there. That provincial financial support for basic
16 research in agriculture be expanded, as well. Thank you,
17 Bill.

18 MR. R. RICHARDSON: Will the seconder accept that, as
19 well? Okay, we will leave it as one amendment, then, and
20 make it simpler. Are you ready for the question on the
21 amendment? All in favour?

22 (SHOW OF HANDS)

23 Contrary?

24 (DECLARE THE AMENDMENT MOTION CARRIED)

25 MR. R. RICHARDSON: Are you ready for the question on
26 the resolution? All in favour?

27 (SHOW OF HANDS)



1 Contrary?

2 (DECLARE THE MOTION CARRIED AS AMENDED)

3 Resolution 4, secrecy in environmental affairs.

4 -----
5 RESOLUTION 4 MOVED BY DR. G. GRIFFITHS, SECONDED BY ED
6 STOLARCHUK
7 -----

8 MR. R. RICHARDSON: Any comments or questions?

9 MR. K. BLOM: Ken Blom, Alberta Public Health
10 Association. The direction here to the Minister of the
11 Environment, the Solicitor-General and the Energy Resources
12 Conservation Board, Bill 80, if you are familiar with it,
13 has been given second reading under the auspices of the
14 Minister of Municipal Affairs in his specific charge of
15 disaster services, and if this bill goes through as it is
16 now written, it will be a body charged with dealing with
17 matters related to transportation of dangerous goods which
18 in effect has got to be affected by unauthorized spills or
19 release of harmful substances, if you will. Also, the
20 disposal and nature of the methods related to how spills
21 are handled in terms of their ultimate disposal is subject,
22 under present legislation, to approval of the Provincial
23 Board of Health, and there is no mention of that here,
24 either, as well. So in light of that, I would suggest that
25 perhaps these others agencies be added into the resolution
26 or alternatively, that it be directed towards the government
27 per se, because I can feature that as we go along, there
as you tried to cover the steps in secrecy, they will



1 gradually find other ways of covering their steps, if you
2 will.

3 So with that in the back of my mind, I will propose
4 an amendment that the Government of Alberta take steps to
5 improve the public notice of and access to information
6 concerning accidental or unauthorized spills and releases
7 of harmful substances. That is proposed as an amendment.

8 MR. R. RICHARDSON: Do we have a seconder for that
9 amendment?

10 MR. C. DUNKLEY: Seconded.

11 MR. R. RICHARDSON: Any discussion?

12 DR. G. GRIFFITHS: May I ask the speaker whether under
13 current legislation as distinct from the bill going through,
14 the Minister of Municipal Affairs is receiving information
15 concerning spills and releases of hazardous substances; can
16 you confirm that, please?

17 MR. K. BLOM: Under his direct charge the Alberta
18 Disaster Program, not specifically as a Minister of
19 Municipal Affairs. That is a charge beyond.

20 DR. G. GRIFFITHS: What I have attempted to do in the
21 resolution is to draft it to identify the people who get the
22 information firsthand. It would then in the case of a major
23 spill, it would go from them to the Minister of Disaster
24 Services, am I not correct?

25 MR. K. BLOM: No, it would go direct to him; it
26 should.

27 MR. R. RICHARDSON: Bill, do you have a comment?



1 MR. BILL FLOOK: The comments may be on the verge of
2 being appropriate, but since we are discussing the
3 resolution and not the text following it, but it may be
4 appropriate to include in the list of people to whom this is
5 directed the appropriate ministers decided by Ken. I wonder
6 if Graham might wish to take that under advisement as a way
7 of getting it to the Minister of Municipal Affairs and any
8 other ministers.

9 MR. R. RICHARDSON: Which minister was that, Bill?

10 MR. BILL FLOOK: The Minister of Municipal Affairs
11 who is responsible for disaster services.

12 DR. G. GRIFFITHS: I understand the point, but the
13 resolution is generalized to refer to the Government of
14 Alberta; then we should specify in sending it out exactly
15 who is expected to reply to it, and there would now, I
16 understand, be five replies which would be expected, but we
17 stated in the text of the resolution also the Minister of
18 Municipal Affairs in his capacity as being in charge of
19 disaster services, and the Minister of Health that is
20 responsible for the Provincial Board of Health. I can
21 accept the amendment under that understanding that we will
22 seek replies from those five persons.

23 DR. M. KOSTUCH: Martha Kostuch; I would ask that
24 copies be sent to the MLA's and that they not be directed
25 specifically to all MLA's; I understand that is the way we
26 had this. Could we make that -- ?

27 DR. G. GRIFFITHS: That was my understanding, also, Mr.



1 Chairman.

2 MR. M. MUC: Just a bit of clarification; is
3 there is a policy in place now that is simply not being
4 followed? In the background you suggest that it should be
5 a stated policy, and then you have again; that is suggesting
6 that this policy has become eroded. If this is the case,
7 what we are really saying is please follow the policy and
8 don't take steps because that's not being directed enough.
9 We are saying there is a policy that can be applied, and
10 you're not applying it, so please apply it. Is the step we
11 are asking for through this resolution?

12 DR. G. GRIFFITHS: Not as such; we are asking for
13 improvements in public notice and access to information
14 about spills. There has been in the background note a
15 reference to Mr. Yurko's policy. Whether that is still the
16 policy or not still the policy, is a question that you
17 would have to direct to Mr. Jack Cookson. If he claims it
18 is still the policy, then it is not being followed. Perhaps
19 it was only Mr. Yurko's policy and not his; I can't answer
20 that.

21 MR. M. MUC: I would question how one would
22 resolve that such steps are being taken that are satisfactory.
23 If one makes an initiative and suggests that they are
24 complying with your request, you might suggest that is
25 still not sufficient, but the point is that they are taking
26 initiative and are meeting your request at another level.
27 So again, I am asking for an interpretation of "take steps."



1 It is a very vague and ambiguous, open to question and open
2 to various actions, as well.

3 DR. G. GRIFFITHS: By "take steps," I would have in
4 mind legislative changes and changes in administrative
5 directions.

6 MR. M. MUC: Then you have to specify that or
7 else you are not providing enough direction. I think it
8 makes for a very weak and ineffective resolution. I hate to
9 be a devil's advocate, but I would rather, you know, look at
10 the other viewpoint as to how I would avoid living up to
11 the responsibility that you're asking me to within the
12 resolution.

13 DR. G. GRIFFITHS: Can you propose an amendment to the
14 wording?

15 MR. B. IRWIN: Mr. Chairman, point of order, we
16 already have one amendment; we have to deal with that first.

17 MR. R. RICHARDSON: I guess we should. Are you ready
18 for the question on that first amendment?

19 MR. M. MUC: Can I suggest that, something that
20 was passed on to me by Dr. Bentley, that --

21 MR. R. RICHARDSON: Perhaps we better vote on that
22 amendment first.

23 MR. M. MUC: I think he is suggesting that instead
24 of using the word "improve," that we substitute it with the
25 word "ensure." That might suggest a greater policy
26 statement, because improving can be a different level. But
27 when you say "ensure," you're taking a definitive sort of



1 position that you are requesting that it be done.

2 MR. R. RICHARDSON: Would you like to put that into
3 your motion, and would your seconder accept this?

4 MR. E. STOLARCHUK: Yes.

5 MR. R. RICHARDSON: Okay, we will deal with it as one
6 amendment.

7 MR. BILL FLOOK: Mr. Chairman, may I offer my
8 comment that as one who is being continually faced with
9 the problem of doing just this, disseminating information
10 and knowing how complex this can become, it seems to me
11 that you might wish, though it is late in the day to do it,
12 to reconsider this entire resolution and try to pin down a
13 specific action that we wish to make the centre of the
14 resolution. For instance, that notice of the occurrence
15 be placed in all daily newspapers or something quite
16 specific. I tend to agree now, and I am surprised at this
17 late date that it should come as a surprise to me, but I am
18 rather surprised at how vague the request or the point of
19 this resolution appears to be now that it is read in the
20 cold light of day.

21 MR. BILL BATYCKY: Point of clarification. On the
22 amendment to the motion, I can't remember the exact wording,
23 you did make reference to the Government of Alberta; now,
24 would that also cover the ERCB, or would you use the
25 Government of Alberta and concerned agencies?

26 MR. K. BLOM: The direction of my amendment was
27 basically that the words "the Government of Alberta," it is



1 all-inclusive. The directions, I believe, in terms of
2 departmental notice be directed to in the back-end, the
3 Premier, the Solicitor-General, the ERCB and the Disaster
4 Services Minister and the Minister of Social Services and
5 Community Health and so on.

6 MR. R. RICHARDSON: I believe they are all a part of the
7 Government of Alberta.

8 If there is no other comments, are you ready for
9 the question on the amendment? All in favour?

10 MR. M. MUC: Could you read the amendment before
11 you call the question?

12 MR. R. RICHARDSON: Certainly. Be it resolved that the
13 Government of Alberta take steps to ensure public notice of
14 and access to information concerning accidental or
15 unauthorized spills and releases of harmful substances.

16 MR. M. MUC: If we defeat this amendment, then
17 with Bill's request, then would be open that we defer?

18 DR. M. KOSTUCH: You can make a motion to table even
19 with the motion to amend on the floor.

20 MR. R. RICHARDSON: Bill can't make one; that is why I
21 didn't accept it as a motion.

22 MR. M. MUC: I would make that; I feel it should
23 be deferred and re-evaluated. I move a motion to table it,
24 then.

25 MR. BILL IRWIN: I will second that.

26 MR. R. RICHARDSON: All in favour of the motion to
27 table? Do you wish this tabled completely, or do you wish



1 it worked on tonight and brought up tomorrow?

2 MR. M. MUC: I wish it tabled until tomorrow.

3 MR. R. RICHARDSON: The motion is that it would be
4 tabled until tomorrow. All in favour?

5 (SHOW OF HANDS)

6 (MOTION PASSED)

7 MR. R. RICHARDSON: Now, we'll move on to the next
8 resolution which is the Non-Renewable Resources Study
9 Group, and Chris Dunkley will come up.

10 Resolution 5 is precise definitions for land
11 classes in Alberta.

12 -----
13 RESOLUTION 5 MOVED BY CHRIS DUNKLEY, SECONDED BY GERRY
14 PASCHEN
15 -----

14 MR. C. DUNKLEY: I think it would be fair to say that
15 we had a series of closed meetings on the first two
16 resolutions that we are going to present, starting off with
17 Peggy Thompson giving us the background on all her research
18 work, and Fred Bentley was at that meeting. And then we
19 heard from the Alberta Provincial Planning Department, the
20 Alberta municipalities, Unifarm and the Regional Planning
21 Board people, and the whole upshot of this particular
22 resolution was that there is just too much looseness in the
23 wording of the Regional Planning Policy and the Municipal
24 Bylaws. So to get some uniformity of usage, we felt that it
25 was important to clarify these terms so that there would be
26 some uniformity brought into provincial policy and
27 legislation. That is the main purpose behind it.



1 MR. R. RICHARDSON: Any comments?

2 DR. T. VEEMAN: I guess at previous meetings I have
3 expressed my concern that this is probably looking for a
4 Holy Grail; I really don't think that it is going to be very
5 possible to define prime land as clearly as people would
6 like because really land is prime not only for biological
7 and soil reasons, but for social and economic reasons, and
8 more particularly because of its location. So the
9 Department of Agriculture's going to have real fun
10 trying to define prime farm land for you. Perhaps such a
11 study is needed, but I think the actual coming up with hard,
12 fast definitions is not going to be possible. If it is
13 done in terms of CLI classifications, I think we will be led
14 down the garden path.

15 MR. R. RICHARDSON: Any other comments? Are you ready
16 for the question? All in favour?

17 (SHOW OF HANDS)

18 Contrary, if any?

19 (MOTION CARRIED)

20 -----
RESOLUTION 6 MOVED BY CHRIS DUNKLEY, SECONDED BY GERRY
21 PASCHEN

22 -----
DR. M. KOSTUCH: Martha Kostuch; I have some
23 problems with this; I hope that wildlife would be allowed
24 to use prime agricultural land. I hope that recreation
25 would be allowed to use prime agricultural land, and other
26 uses. I think we are putting agricultural land, setting
27 some sort of god over agricultural land, and I think there



1 other uses that are just as valuable, wildlife being one of
2 them, wildlife habitat. I certainly don't think it is
3 necessarily a conflicting use. I think what we want to do is
4 restrict uses that will prevent us from ever using this land
5 again for agricultural land. The way this reads now,
6 wildlife could not use Class 1, 2, 3 agricultural land.

7 MR. C. DUNKLEY: Martha, our whole concentration in
8 this was land that was capable of producing crops, which is
9 classified as Class 1, 2, 3, the way it was presented to us
10 by Fred Bentley when we first started this whole thing, so
11 we were thinking of farm production of cereal crops. We
12 weren't thinking of like the foothills areas which is prime
13 for wildlife but may not be for agriculture.

14 DR. M. KOSTUCH: But there is plenty of land around
15 the city that is 1, 2 or 3 land that is superb wildlife
16 habitat, and it may actually be better wildlife habitat and
17 it may be producing higher protein content than it would be
18 if it were put into agricultural purposes. Or it may be
19 excellent recreational land, and they are not necessarily
20 conflicting uses, either. We can have agricultural land
21 also be used for wildlife habitat by leaving hedges and
22 all sorts of things. I think by this we're being too
23 restrictive and putting agricultural above every other use,
24 and I think some other uses are also valuable and they
25 should be given, not necessarily in the foothills area, but
26 I think the city people also have a right to see some
27 wildlife, too, and also to have some recreation. I support



1 agriculture, but I don't see where it is wholly above
2 everything else.

3 MR. J. SHEMANCHUK: Joe Shemanchuk; I would like to
4 support Martha on that, too; it is rather vague the way it
5 is written. It is all right if you know what Class 1, 2
6 and 3 are, but if you don't, you just put on a restriction
7 for agricultural use only; perhaps some of this Class 1, 2,
8 3 land might be put in reserve for agriculture in the future
9 by applying this into recreation or wildlife or some other
10 use immediately. It could still be good agricultural land
11 which is not necessarily being used right now; what we are
12 looking for is to preserve it. The way this thing reads,
13 if it is not just for agriculture right away, then we don't
14 need to preserve it; that's the way I get it.

15 MR. R. RICHARDSON: Any other comments?

16 MR. BILL FLOOK: Mr. Chairman, may I offer a
17 suggestion that the Government of Alberta enact legislation
18 to restrict the prime use; insert the word "prime" before
19 the word "use," and that will take care of Martha's comment.

20 MR. C. FINLAY: Cam Finlay; may I suggest that this
21 has a very important longterm concern for many of us, and
22 like the other motion, would the Chairperson be prepared to
23 review this with maybe Martha and one or two other people
24 and bring it to the meeting tomorrow, as we have to meet on
25 another resolution anyway?

26 MR. R. RICHARDSON: If you would like this to happen, I
27 suggest you make a motion to table it until tomorrow.



1 MR. C. FINDLEY: I so move.

2 MR. R. RICHARDSON: Do we have a seconder for that
3 motion?

4 MR. C. WALKER: Chris Walker; I second it.

5 MR. R. RICHARDSON: All in favour?

6 (SHOW OF HANDS)

7 Contrary?

8 (MOTION CARRIED)

9 -----
RESOLUTION 7 MOVED BY CHRIS DUNKLEY, SECONDED BY IAN SHAW

10 MR. C. DUNKLEY: I would like to ask one thing. I
11 don't consider myself a mechanical authority at all, but
12 this motion came out of the attendance by two of our members
13 to the automotive shows that were held, I think last fall,
14 not this immediate fall, but a year ago. They were quite
15 impressed with the demonstration at these shows. Now I
16 don't even know this firm, Kenworth Western, personally, but
17 I wonder if I could ask Bill Flook to speak on this
18 resolution because that firm has been very successful right
19 now in assembling, is it a truck, Bill? I wonder if you
20 would mind clarifying that.

21 MR. BILL FLOOK: Mr. Chairman, I think the point at
22 issue is is it feasible for an automobile assembly plant to
23 be located in Alberta starting from scratch to produce a
24 taxicab that is going to be so outstanding in every respect
25 that it will knock every other competing taxicab off the
26 market. The answer that I am prepared to give to that is
27 that the proposed type of vehicle would be assembled from



1 components that were already assembled by manufacturers in
2 other parts of the world, including Canada, and would be put
3 together on a custom basis into a vehicle that would be
4 specifically designed to use as a taxicab. In proof of the
5 feasibility of this, or in evidence of the feasibility of
6 this, I would like to cite the experience of the Kenworth
7 Truck Company which was represented to us during the public
8 hearings on noise. This is an eminently successful
9 operation which assembles truck, more or less on a custom
10 order basis, from engines, transmission, and other
11 components that are supplied by subcontractors who do this
12 sort of thing in the States and other parts of Canada.
13 These trucks have developed a reputation for reliability and
14 efficiency second to none. In fact, I believe they are
15 commonly referred to as the Cadillac of trucks. So I am
16 merely citing this as evidence of the potential success of
17 an operation like this if it were patterned after that kind
18 of operation. That is what Chris was referring to.

19 MR. R. RICHARDSON: Are there any comments or questions?

20 MR. M. MUC: You are also asking him to pursue
21 this beyond the investigation; are you asking him to pursue
22 it beyond the investigative level, or are you dissatisfied
23 with the investigation which would possibly --

24 MR. C. DUNKLEY: Hopefully promote it, yes.

25 MR. M. MUC: Well then I would propose the motion
26 be amended to include investigation and pursue the
27 possibility, because otherwise, I can see it as being



1 investigated and being brought back saying it's feasible,
2 now what do you do, you have to have another resolution
3 saying would you now pursue it. I think you should have it
4 all-inclusive.

5 MR. C. DUNKLEY: Your point is well taken.

6 MR. R. RICHARDSON: Do we have a seconder for the
7 amendment?

8 DR. G. GRIFFITHS: I will second it.

9 MR. C. WALKER: Chris Walker; I would like to raise
10 one more point and that is that the wording of the
11 resolution is to produce more efficient, economical,
12 convenient and minimally-polluting vehicles; perhaps, seeing
13 as how there seems to be emphasis on assembly, perhaps
14 we should change the word "produce" to "assemble".

15 MR. C. DUNKLEY: The background makes that very clear.

16 MR. BILL FLOOK: Mr. Chairman, I think maybe a little
17 bit of further information is necessary here. It is not
18 entirely an assembly in the sense that Volvos are assembled
19 in Canada. An assembly is commonly taken to mean that all
20 of the component parts are supplied and all of them are
21 merely mated at the point of assembly. In this case, that
22 component is the chassis and possibly some body components
23 would actually be manufactured on-site if the pattern of the
24 Kenworth truck is followed. They actually build their own
25 chassis.

26 MR. R. RICHARDSON: Are there any other comments?

27 MR. I. SHAW: Ian Shaw; I would like to point out



1 to further support Bill Flook's comments that there probably,
2 with the exception of the Rolls-Royce, all motor vehicles
3 are not produced at a plant, they are only assembled.
4 General Motors or any other company contracts out all their
5 components and puts them together. So I don't think that we
6 have to argue over the word "produce".

7 MR. R. RICHARDSON: Okay, we are just talking about the
8 amendment; are you ready for the question on the amendment?
9 The amended resolution would be that the Government of
10 Alberta and the Department of Consumer and Corporate Affairs
11 investigate and pursue the possibility of establishing a
12 plant, preferably in Alberta, to produce more efficient,
13 economical, convenient and minimally-polluting vehicles for
14 use as taxicabs. All in favour?

(SHOW OF HANDS)

16 Contrary?

17 (SHOW OF HANDS)

18 (MOTION CARRIED)

19 MR. R. RICHARDSON: Back to the original motion, is
20 there any discussion on the original motion as amended?

21 MR. T. COTTRELL: Tom Cottrell; would it be possible
22 to accomplish what is in this resolution by converting
23 currently available vehicles to natural gas or propane
24 power?

25 MR. C. DUNKLEY: No, they wouldn't handle wheelchairs
26 and that type of thing; they are quite a different design.

27 MR. R. RICHARDSON: They are a different body type, I



1 believe, from what Chris has told me. Terry?

2 DR. T. VEEMAN: At the risk of being a curmudgeon
3 of the conference, it is my opinion that it is a wacky idea;
4 we don't even have car assembly in this province and we're
5 going to assemble and produce taxicabs. Unless I missed
6 something that this can be done on a small scale, but
7 anything that I know about cars, anyway, requires
8 relatively large-scale production to produce at any minimal
9 cost.

10 MR. BILL FLOOK: Mr. Chairman, I think I might
11 answer that. Western Star Trucks at Kelowna and Kenworth
12 at Burnaby, B.C., are evidence of the fact that what you are
13 saying is not correct.

14 MR. BILL IRWIN: Bill Irwin; I think there is a
15 difference, though, between a taxicab and a car and a truck.
16 Most big trucks are assembled in small numbers; you don't
17 have one big plant that produces a hundred thousand big
18 trucks. Normally, I think the only successful taxicab
19 company that is building is Checker Cab in the States; that
20 is all they build is taxicabs. Other than that, you are
21 competing against the big companies; you have got to have
22 volume to be able to compete against them. If I don't need
23 a taxicab that has these special features, I'm going to go
24 down the street and buy one that is half the price or less.

25 MR. J. SHEMANCHUK: I have one small comment. A thing
26 like this the Government of Alberta and the Department of
27 Consumer and Corporate Affairs --



1 MR. C. DUNKLEY: It is the Department of Consumer
2 Affairs that would look after the promotion of it.

3 MR. R. RICHARDSON: Any other comments or questions?
4 Are you ready for the question? All in favour?

5 (SHOW OF HANDS)

6 Contrary?

7 (SHOW OF HANDS)

8 (MOTION CARRIED)

9 -----
RESOLUTION 13 MOVED BY L. WOJTIW, SECONDED BY DR. G. GRIFFITHS

10 MR. R. RICHARDSON: Any questions or comments?

11 MR. J. BYARD: My name is James Byard and I have
12 first a question before I make any comments. Having no
13 background into the research that went into this resolution,
14 what is meant by alternate applications?

15 MR. L. WOJTIW: Anything that is not at present
16 being used.

17 MR. J. BYARD: To put it bluntly, I think this
18 resolution misses the boat. Having worked on the
19 establishment of a community-based recycling operation in
20 the City of Penticton, and done some work for the Recycling
21 Council of British Columbia, you won't really do anything
22 with this resolution. The uses of paper products have
23 already been well defined; what is really needed is market
24 development to provide assured markets for recycled products
25 and the establishment of some infra-structure to support
26 secondary resource development, and specifically, community-
27 based resource recycling operations. I really can't see



1 where you're doing anything. I don't know whether I can say
2 anything further without going into great detail. Having been
3 involved actively in recycling, we found we needed such
4 things as disposal diversion credits, which is a concept to
5 subsidize recycling operations; problems often related to
6 markets is that in order to get an assured price you need an
7 assured supply of high-quality material. I acted as a
8 consultant to a small community organization in the Town of
9 Grimshaw that wished to start a recycling operation, and
10 perhaps specifically newsprint, and I had to advise them to
11 shut it down because there simply wasn't the support
12 structure there. The markets are there, but they had no way
13 of getting the stuff to the market and they had no way of
14 having an assured price.

15 MR. L. WOJTIW: So if I understand what you are
16 trying to say is that other than the construction industry,
17 there is no other application; is that what you are trying to
18 say?

19 MR. J. BYARD: I'm not saying there is no other
20 applications. What I'm saying is that the applications are
21 there; it's a matter of mechanics of being able to get the
22 material to the markets that are already there, and providing
23 some sort of support to the establishment of community-based
24 recycling operations. Currently you now have fairly large
25 centralized industrialized recycling going on, and what this
26 results in is low-quality material for which there are
27 limited markets. A community-based recycling operation is a



1 labour-intensive operation, which means materials are often
2 hand-sorted providing high-quality products which you can
3 get a better price for.

4 In the Province of British Columbia now most
5 community-based recycling operations are shipped either to
6 the United States or Overseas. The operation I was with was
7 shipping to the supplier in Washington and was getting a
8 premium price for the material because of high-quality
9 materials. Simply because it was a community-based labour-
10 intensive recycling operation, it was guaranteed not only
11 a volume but a quality, and what is needed is some sort of
12 support for that.

13 MR. R. RICHARDSON: Any other questions or comments?

14 DR. G. GRIFFITHS: Our last speaker, because he does
15 not have status here, has not put forward an amendment to
16 the resolution. Perhaps I could try to make an amendment
17 to take account of what he has just said. There was a
18 suggestion that he could provide some additional background
19 material which could go into the background note. I move
20 the following amendment: Be it resolved that the Department
21 of the Environment support the production and marketing of
22 alternate products made from recycled paper. That removes
23 the emphasis on research, since our previous speaker said
24 the research has been done, but it is a problem of marketing.

25 MR. R. RICHARDSON: Do we have a seconder for that?

26 MR. G. DIXSON: I will second that.

27 MR. BILL FLOOK: What I was going to say is, what I



1 believe you are facing now is a totally different resolution.

2 MR. L. WOJTIW: I agree with that.

3 DR. M. KOSTUCH: Are you going to rule that change of
4 intent, then you rule the amendment is out of order?

5 MR. R. RICHARDSON: Do you think it is a change of intent?

6 MR. L. WOJTIW: I think it is.

7 MR. R. RICHARDSON: Okay, then the amendment is out of
8 order.

9 DR. M. KOSTUCH: I just wanted to explain, Lou
10 proposed this resolution, and he should be back saying why
11 it is true, but it did come about as a result of a meeting
12 we had with the recycling, well with the paper recycling
13 people, and with the government recycling people where they
14 indicated the reduction in the marketing because of the
15 lowered construction going on in the province. And because
16 that was the main use of the material in this province,
17 when the construction industry went down, then our marketing
18 went down. A lot of paper was available; in fact it was
19 stockpiled and that was largely the result, then, of the
20 community had to close down their recycling depots at that
21 time. That is why this resolution came about. We see the
22 need for other resolutions pertaining to recycling, and we
23 don't see this as the total answer for recycling. We know
24 there is more work that needs to be done, there is other
25 programs that need to be done, we just see this as one phase,
26 as one of the things that need to be done, and hopefully
27 more work will be done in the future on this area.



1 MR. L. WOJTIW: I think Mr. Byard has pointed out
2 quite a few good points that need to be considered, and so
3 the marketing aspect is one part that we did not really
4 consider when we were talking about this resolution at that
5 time.

6 MR. I. SHAW: Speaking to the amendment, is it the
7 function of the Environment Department to engage in
8 marketing?

9 MR. R. RICHARDSON: We ruled the amendment out of order,
10 Ian, so it is dead.

11 MR. BILL IRWIN: Bill Irwin. Mr. Chairman, I find
12 it inconceivable that every possible use has been researched.
13 I think the resolution is still in order in that respect.
14 That is really the basic problem, there probably are uses
15 available for -- if there is development work done and
16 research done to find the potential uses then the market can
17 be developed. But if you can't find the use, and that is
18 the current problem that's been brought up in Edmonton and
19 probably throughout Canada, there are no known uses that are
20 economical, so they need to find alternate uses.

21 MR. R. RICHARDSON: Any other comments or questions?
22 Are you ready for the question? All in favour?

23 (SHOW OF HANDS)

24 Contrary?

25 (MOTION CARRIED)

26 MR. R. RICHARDSON: Can we go on to Resolution 8, please.

27 -----
RESOLUTION 8 MOVED BY L. WOJTIW, SECONDED BY DR. M. KOSTUCH



1 MR. R. RICHARDSON: Any comments or questions? Are you
2 ready for the question? All in favour?

3 (SHOW OF HANDS)

4 Contrary, if any?

5 (MOTION CARRIED)

6 -----
RESOLUTION 9 MOVED BY L. WOJTIW, SECONDED BY IAN SHAW

7 MR. R. RICHARDSON: Any discussion? Are you ready for
8 the question? All in favour?

9 (SHOW OF HANDS)

10 Contrary?

11 (MOTION CARRIED)

12 -----
RESOLUTION 10 MOVED BY L. WOJTIW, SECONDED BY DR. M. KOSTUCH

13 MR. R. RICHARDSON: Any comments?

14 MR. M. MUC: I think we have to make an amendment,
15 and I apologize because I'm on the study group. In the
16 control of air pollution, I think in Alberta that that is the
17 standard that we need, you know, we can't go on a global
18 basis, so there is really no point to it.

19 MR. R. RICHARDSON: Where did you want us to put this?

20 MR. L. WOJTIW: I believe he wants us to put it at
21 the end - air pollution in Alberta.

22 MR. R. RICHARDSON: Is there a seconder for that
23 amendment?

24 MR. R. SHAW: I will second that.

25 MR. R. WHISTANCE-SMITH: I don't think that amendment is
26 necessary, because the government doesn't have jurisdiction
27 out of Alberta.



1 MR. R. RICHARDSON: This would be my comment, too.
2 MR. M. MUC: I retract the amendment.
3 MR. R. RICHARDSON: You are withdrawing the amendment?
4 MR. M. MUC: Yes, I am.
5 MR. R. RICHARDSON: Any further discussion?
6 MR. T. COTTRELL: I am looking for work. Why wouldn't
7 the Environment Council hold these hearings instead of a
8 select committee?
9 MR. L. WOJTIW: I believe the answer to that is
10 timing.
11 MR. R. RICHARDSON: I believe it is discussed in the
12 background.
13 It is in the fourth paragraph of the background.
14 MR. G. GREEN: My name is George Green. I wonder if
15 you are not running the risk of undercutting the support
16 that the government gives to the ECA by suggesting another
17 set of hearings. I am concerned that the ECA's
18 recommendations haven't been accepted in the past, and I
19 think you still have to work through the ECA. Implicit in
20 this is that the ECA has not been able to get its
21 recommendations accepted; you need a legislative mechanism,
22 and if you put this resolution through, we are going to be
23 running the risk of taking away any power the ECA is going
24 to have.
25 DR. M. KOSTUCH: I disagree. I think the ECA has
26 held some very good hearings, and many of its recommendations
27 have been accepted. I also think the select committees have



1 held some very good hearings, specifically on fisheries and
2 also on surface rights, and I think their recommendations
3 have also been very good and been accepted.

4 I think the question surrounding the Clean Air Act
5 and the regulations are political questions. They need
6 political solutions, and I think that the select committee
7 is the best way to get political solutions. I also think
8 that the people in the legislature need to know what the
9 concerns of the public are, and they need to have direct
10 contact with the people and find directly out what concerns
11 those people have regarding air pollution, and I think the
12 best way to do that is through a select committee.

13 I think the ECA has lots of work to do and I think
14 if they want more, they can find lots more for them to do,
15 and I don't think it's any slight to them that we are asking
16 for a special select committee.

17 MR. R. RICHARDSON: Any other comments? Would you have
18 one, Alistair?

19 MR. A. CRERAR: No; no comment.

20 MR. R. RICHARDSON: Anyone else have any comments? Are
21 you ready for the question? All in favour?

22 (SHOW OF HANDS)

23 Contrary?

24 (SHOW OF HANDS)

25 (MOTION CARRIED)

26 -----
RESOLUTION 11 MOVED BY L. WOJTIW, SECONDED BY K. BLOM

27 -----
MR. G. STEWART: George Stewart, Non-Renewable



1 Resources Study Group. Unfortunately, I didn't read this
2 resolution before the time of this meeting, and therefore
3 wasn't able to discuss the contents with any experts.
4 However, just in looking at the contents of 4.3.1 and 4.4.2
5 as reflected in the background, I wonder if we are not
6 perhaps making recommendations that are ten years out of date.
7 I'm wondering perhaps what brought that resolution forward
8 specifically, what things.

9 MR. L. WOJTIW: Simply because the government hasn't
10 acted on those resolutions at all up to now; that was one of
11 the reasons why we have re-introduced them again and get
12 pressure on the government to act on them.

13 MR. G. STEWART: What evidence do you have that they
14 haven't acted on them? I mean, most of these things I look
15 through here seem to me to be common practice. In detail
16 there may be some things that could be improved upon, but --

17 MR. L. WOJTIW: Are you suggesting that we should
18 rewrite the 4.3.1, then?

19 MR. G. STEWART: I'm wondering what concerns there are
20 that put us back ten years almost to hearings conducted in
21 sour gas industry at that time because I look at 4.3.1 and
22 4.4.2 as shown in the background, I can't see anything that--

23 MR. L. WOJTIW: Well let's go one by one. The first
24 one, I haven't seen any reports in terms of ground level
25 concentrations of sulphur gas or plant practices. Have you?
26 I haven't seen any publications in the last ten years or
27 even reports.



1 MR. G. STEWART: There has been some studies done of
2 that sort of thing.

3 MR. L. WOJTIW: Which one? There isn't any.

4 MR. G. STEWART: There isn't any in the files of the
5 Department of the Environment, is that what you are saying?

6 MR. L. WOJTIW: No, there isn't any looking at any
7 of the government.

8 MR. G. STEWART: You are asking basically for studies,
9 then; okay.

10 MR. L. WOJTIW: That is what it says, doesn't it?

11 Okay, how about the second one, the effects of
12 ground level concentrations be related to immediate effects.
13 I mean, they are basically looking at the Pincher Creek
14 situation right now, but other than that, there isn't any
15 relation to the --

16 MR. G. STEWART: I guess probably I don't understand
17 what you mean.

18 MR. BILL FLOOK: May I interrupt for a moment? This
19 is rather important. In looking at the background, I notice
20 there is an unfortunate error in the transcript. At the
21 back of the page, is the second page of Resolution 9, and
22 you would have to refer to the back of Resolution 9 for
23 the second page of Resolution 11. I'm sorry about that.
24 This is done by commercial people, not by us.

25 DR. M. KOSTUCH: We considered taking this apart and
26 perhaps changing and picking out only parts of this, because
27 there has been some work done on a few of these areas, but



1 it has been very limited. Rather than just picking out
2 those parts, we wanted to re-affirm that all of the
3 recommendations are going to be carried out, all of the
4 recommendations included in that report. Some of these,
5 there has been very little done on, others there may be some
6 work done on them, but certainly we wanted to re-affirm that
7 all of these recommendations are going to be carried out.

8 MR. R. RICHARDSON: Any other comments?

9 MR. R. SHAW: Ridley Shaw, Pollution Study Group.
10 I would like to speak to the gentleman that was speaking
11 before Martha to maybe clarify some points here. We discussed
12 this a very great deal, and of course, particularly related
13 to the Pincher Creek situation. Take for example 4.3.1 and
14 this will follow to almost all of them where it says that
15 measurements of ground level concentrations of sulphur gas
16 from sour gas plants be designed in such a manner as to be
17 directly corelated with plant practices and weather
18 conditions. One of the great difficulties we are having
19 with the sulphur measurement being done by Environment and
20 by the plants when they do their own work, is that they are
21 24-and 48-hour averages. They have absolutely nothing to
22 do with what has been going on hour by hour, and if you
23 follow through, you have the same difficulty with all of
24 these, such as the effects on animals, and the effects on
25 people, in particular. We are dealing with daily averages
26 which are totally meaningless in trying to evaluate the
27 problems we are having with these plants.



1 MR. R. RICHARDSON: Any other questions or comments?

2 Are you ready for the question? All in favour?

3 (SHOW OF HANDS)

4 Contrary?

5 (MOTION CARRIED)

6 MR. M. MUC: Would it be possible for the
7 speakers to identify whether they are speaking for or
8 against the motion. I think if we did that, then it would
9 be established to the point to which they are speaking, and
10 people could either try to develop a supportive argument or
11 whatever else.

12 MR. R. RICHARDSON: Okay, that is a good idea.

13 -----
13 RESOLUTION 12 MOVED BY L. WOJTIW, SECONDED BY DR. M. KOSTUCH
14 -----

14 MR. R. RICHARDSON: Any comments or discussion?

15 MR. J. PROSTELBE: John Prostelbe; I want to suggest --
16 can I make this a comment -- I want to suggest that this is
17 redundant, that the Alberta Government is already working on
18 this. The Alberta Government Department of Environment is
19 already putting together some ideas to adopt the federal or
20 national emission guidelines essentially as they are, with
21 some changes, but essentially as they are. Does that make
22 this redundant?

23 MR. L. WOJTIW: If they are, then yes, that would
24 make it redundant.

25 DR. M. KOSTUCH: I disagree. That would give
26 additional support to what they are doing, and I think that
27 they need the support at this time.



1 MR. R. RICHARDSON: It hasn't been done yet, then? As
2 long as it hasn't been done, then I think the motion is in
3 order.

4 Any other comments? All in favour?

5 (SHOW OF HANDS)

6 Contrary, if any?

7 (MOTION CARRIED)

8 MR. R. RICHARDSON: Thank you, Lou. Andy, can we have
9 you up here next? The first resolution for the Renewable
10 Resources Study Group is pesticide applicator training
11 program.

12 -----
13 RESOLUTION 14 MOVED BY A. WIRENGA, SECONDED BY R. WHISTANCE-
SMITH

14 -----
15 MR. M. MUC: I would like to ask the question,
16 what standards is it being increased to?

17 MR. A. WIRENGA: I believe we discussed that quite at
18 length, and there was the basic factor that the time
19 required, or I suppose to rephrase it another way, that the
20 time frame in which all this material was crammed into was
21 not conducive to absorption of the material. It was
22 basically a factor of there was so much material to be
23 studied, and more and more products are being brought on the
24 market, and just environmental potential of these products.

25 MR. M. MUC: I'm sorry, I still find it difficult
26 to understand how a person trying to respond to your
27 resolution would. If they extended it by a day, the
training program, then with respect to your length of time,



1 they made that requirement, the quality if they brought
2 somebody with a Master's Degree they included quality, now
3 I'm being a little bit facetious and I hope you understand
4 that, but I'm afraid that people do avoid responsibility in
5 the easiest way possible. That is the way things happen, and
6 I'm wondering if you are going to find it difficult to get a
7 satisfactory resolution because, you know, this word
8 "increased" has variable interpretations. I could be
9 incorrect on that: maybe it is a personal problem.

10 MR. J. SHEMANCHUK: Joe Shemanchuk, and I would like to
11 speak again to the resolution, and also I would like to ask
12 questions as to where they got the information that leads to
13 five days. The pesticide applicators courses are offered
14 for different purposes, and they don't specify as to what is
15 the inadequacy of the present course, and there is no way we
16 can recommend that they increase the length of the course
17 when we don't specify what is inadequate for the present
18 course. There is a home study course offered which is very
19 extensive. It is 20 lessons; you do it at home. After
20 you've taken that course, you take your medical. If you
21 pass your medical, then you get your applicator's license.

22 Now there is another one that is offered at the
23 Olds College where you take a certain number of lectures to
24 identify certain pests, identify certain classes of
25 compounds, and after you pass that course, you can qualify
26 for a license providing you can pass the health medical.

27 Now until we can tell what is lacking in the



1 present course, I think this resolution is not going to be
2 satisfactory.

3 MR. R. WHISTANCE-SMITH: Ron Whistance-Smith. The information
4 we obtained was from the two gentlemen primarily responsible
5 from the Department of the Environment for supervising
6 these training courses; that is where we got the three to
7 five days. That is an average; there are longer courses.
8 They told us about the home study programs and everyting
9 else. They were very much concerned.

10 To answer Mike Muc's question about the "what are
11 they going to lengthen it to," these gentlemen have plans
12 that they would like to implement. We are not experts in
13 pesticides or in the education of pesticide applicators,
14 therefore, we do not see it as our responsibility to tell
15 the government how long the course should be. The courses
16 vary tremendously, as Joe has just mentioned. It depends
17 partly on which level of license you're going for, and there
18 are, let's see, well quite a considerable number of
19 different licenses for the application of different materials
20 and for different jobs.

21 We could have created the resolution if we were to
22 spell all this out, but it would be about ten pages long,
23 and I don't think that would be particularly appropriate
24 either. So what we have done is try to put together a
25 resolution that would put forward our feeling that a much
26 longer - I won't say much longer - that a longer time is
27 necessary for the training of the applicators who are in



1 fact applying for licenses at all of the various levels. We
2 then left it up to those responsible for drawing up those
3 training programs to actually spell out the length of the
4 time, or to suggest finally to them what would be an
5 appropriate length of time, a suitable length of time.

6 DR. G. GRIFFITHS: I support this motion in principal,
7 but there has been a number of valid points raised in
8 discussion, which suggests to me that we have inadequate
9 background material with it. In the circumstances, Mr.
10 Chairman, I wish to move that the motion be tabled and
11 brought back tomorrow.

12 MR. R. RICHARDSON: Is there a seconder for that motion?

13 MR. J. SHEMANCHUK: I will second that motion to table.

14 MR. C. WOOD: Can I completely bypass parliamentary
15 procedure and ask a question? I'm not going to impose a
16 motion or anything else, but I would like to ask a question
17 if I may. You are talking about training for applicator's
18 license. Now is there a license for people who retail this
19 stuff? I mean, this is another problem. You go and buy
20 something, and last summer I went and bought a can of
21 insecticide and I told the girl what my problem was. She
22 reaches on the shelf and says this is what you need, that's
23 \$5 please. She is supposed to tell me how to use this damn
24 stuff. Now is there a license involved there, too?

25 MR. J. SHEMANCHUK: Mr. Chairman, to answer the question,
26 there is a regulation that governs the sale of pesticides.
27 Any pesticide that you buy over the counter has it on the



1 label, and if you don't read it yourself, you have got to
2 read it yourself.

3 MR. C. WOOD: Well that's what she told me to do,
4 but when we had somebody talk to us about this, I think it
5 was the Department of Agriculture, was it, some fellow that
6 came and discussed this with us, I believe he said that the
7 people retailing this stuff are required to tell you how to
8 do it. They can't just tell you to read the label.

9 MR. J. SHEMANCHUK: No, they can't tell you how to use
10 it because the chemical is registered under the Plant
11 Products Act by the Federal Department of Agriculture. You
12 have got to follow whatever is on that label. If you use it
13 contrary to what is on that label, then you are assuming your
14 own liability.

15 MR. C. WOOD: I don't think we are talking about
16 the same thing.

17 MR. R. RICHARDSON: Well the motion to table is on the
18 floor. All in favour?

19 (SHOW OF HANDS)

20 Any contrary?

21 (SHOW OF HANDS)

22 (MOTION CARRIED)

23 -----
24 RESOLUTION 15 MOVED BY A. WIRENGA, SECONDED BY R. WHISTANCE-
SMITH

25 -----
26 MR. R. RICHARDSON: Any discussion?

27 MR. G. DIXSON: I would like to ask a question. How
about the farmer and rancher using the insecticide himself?



1 It says here all employees; how about the fellow who buys
2 it for his own use?

3 MR. A. WIRENGA: I believe that is covered in the
4 Act, itself.

5 MR. R. RICHARDSON: Any other questions or comments?

6 MR. A. WIRENGA: Maybe a little bit of background.
7 Our concern that gave birth to this resolution was the fact
8 of a seasonal employment. Much of this roadside spraying
9 and so on is done in the summertime, and students are hired
10 and that type of thing. So we felt that all these people
11 should know where they're at in terms of the pesticides that
12 they are going to be working with.

13 MR. J. SHEMANCHUK: I support this resolution in
14 principle, but I still don't really quite understand when
15 you say "all employees working". What they should say is
16 anybody working with pesticides, would be just as clear to
17 me, but I believe that you have to have a medical to renew
18 your license. But when they hire people, they don't
19 necessarily have to have a license for all the people working,
20 as long as they have one licensed applicator in the crew.
21 I believe that's right; I'm not too sure on that. So I
22 would just like a little bit more of an explanation where
23 it says all employees working with pesticides.

24 MR. A. WIRENGA: Maybe I could make myself a little
25 bit clearer. First of all, as I tried to say, we are mainly
26 dealing here or concerned with summer employment, mainly
27 students. It might also be pointed out that in the



1 regulation it calls for a licensed applicator to be on-site
2 of licensed spraying once every 24 hours, I believe. So in
3 fact the spraying is usually done by people who are not
4 licensed.

5 MR. BILL BATYCKY: A point of clarification. In my
6 ignorance and so on and so forth, this medical exam is a
7 complete one, so they don't fall over on the job, or what
8 is the group's opinion of this examination?

9 MR. A. WIRENGA: I believe the purpose of this
10 examination would be to determine whether in fact there is
11 any allergic reactions or reactions to the materials that
12 they are going to be working with.

13 MR. R. RICHARDSON: Any other comments?

14 MR. R. WHISTANCE-SMITH: Ron Whistance-Smith. And I would
15 just like to point out to Bill, too, in answer to this, in
our study group it was pointed out that in fact a lot of
16 young female university students also work in these crews at
17 summertime, and the present regulations do not even allow
18 for a pregnancy check. It is quite possible that a young
19 female pregnant could be employed under the present
20 circumstances. So that, aside from the fact that any one
21 person could probably have a susceptibility, let's say a
22 reaction, it wouldn't necessarily be an allergic reaction
23 to the material being applied.
24

25 MR. J. SHEMANCHUK: May I just speak to this once more
26 because it is a mandatory medical examination prior to each
27 spraying season. If they're going to have one prior to,



1 they should have one following because these are toxic
2 chemicals. A pregnancy test, if they did have a medical,
3 you wouldn't know what the response would be to any of these
4 chemicals. There is so many classes of these chemicals
5 that there should be some specification as to what kind of
6 a medical do you expect out of these people. Just a
7 physical examination is not necessarily going to show
8 symptoms; these are nerve poisons. So couldn't we be a
9 little more specific? And isn't it likely that those people
10 who are affected would then get either welfare or Worker's
11 Compensation Board insurance and all these other things?

12 MR. BILL FLOOK: Mr. Chairman, I believe I recall
13 the discussion that went into this resolution. The main
14 point was the point of the fallacy of suggesting the
15 licensed applicator have a medical examination when he was
16 not in fact going to be exposed to chemicals, and to make
17 it more appropriate that the people who were in fact going
18 to be exposed to chemicals have the necessary medical, that
19 the shotgun was being aimed at the wrong target. The
20 licensed application wasn't going to be exposed, but a
21 university student working for the summer would be exposed
22 over an 8-hour day and would have no medical. So to bring
23 them within the umbrella of the system as it exists now, not
24 to point out deficiencies in the prevailing system.

25 MR. R. RICHARDSON: Any further comments?

26 MR. M. MUC: Mr. Chairman, would it be in order
27 to make an amendment to suggest prior to and after each



1 spraying season, or would that be contrary to your motion?

2 MR. R. RICHARDSON: It wouldn't be contrary to it, I
3 don't think, not to the intent of it.

4 MR. J. SHEMANCHUK: I personally don't feel this spells
5 out what you want to do. What you really want us to do is
6 to re-examine the resolution and plug something in, and
7 this resolution does not tell me that.

8 MR. K. BLOM: I'm supporting Joe at the moment in
9 the sense that the mandatory medical examination becomes
10 then a third party examination. We are already in trouble
11 with the Medical Society with the number of medicals
12 required for driving and this and that and the other thing.
13 The other facet of this, I guess, it is my belief that
14 unless you are very specific to a medical practitioner in
15 terms of that which you are going to do, the medical exam
16 he would normally apply may not necessarily have too much
17 credence in terms of its effect as it relates to
18 pesticides, herbicides; that is quite a specialized area,
19 really, and it may involve going beyond the medical
20 practitioner level to someone in a specialist service.

21 I'm not opposed to what seems to be here, although
22 it suggests to me that probably what is needed more than
23 anything in this whole area is a greater education of those
24 people who may become voluntarily or otherwise involved in
25 the area of working with pesticides as to the nature of
26 providing themselves with the use of the protective
27 equipment that is prescribed to development and the ultimate



1 use, and that is where the problem is, in my view.

2 DR. M. KOSTUCH: In light of these discussions, most
3 of them in support of the resolution but questioning the
4 exact wording, I will move that we defer this and the
5 following resolution till tomorrow.

6 MR. R. RICHARDSON: Let's take this resolution by itself.

7 DR. M. KOSTUCH: The next one is the same one.

8 MR. R. RICHARDSON: Well, I agree they are dependent one
9 on the other, but I think we should vote on each one
10 separately.

11 DR. G. GRIFFITHS: I will second the motion to table
12 as affecting Resolution 15.

13 MR. R. RICHARDSON: All in favour?

14 (SHOW OF HANDS)

15 Contrary?

16 (SHOW OF HANDS)

17 (MOTION CARRIED)

18 -----
18 RESOLUTION 16 MOVED BY A. WIRENGA, SECONDED BY R. WHISTANCE-
19 SMITH
19 -----

20 MR. R. RICHARDSON: Any discussion?

21 DR. M. KOSTUCH: I move this motion be deferred until
22 tomorrow.

23 MR. R. RICHARDSON: Is there a seconder for that motion?

24 MR. L. WOJTIW: I second the motion.

25 MR. R. RICHARDSON: Any discussion?

26 MR. M. MUC: I don't understand why; you see, I
27 think there was some discussion prior to tabling and we



1 discussed what difficulties we were having with it, but we
2 are not giving any direction. So I would like to see what
3 objections people are having in this resolution so that
4 those who are going to modify it have some direction.

5 Otherwise, they may come back with something that has been
6 modified but they may still --

7 DR. M. KOSTUCH: I think the argument is the same as
8 the argument on the last one.

9 MR. K. BLOM: This last line here, now provided to
10 licensed pesticide applicators, can we clarify just exactly
11 what is available to those people?

12 MR. A. WIRENGA: I myself am in no position to give
13 you any details on that. It's obvious that there is
14 something available in terms of, I don't know if it is a
15 mobile service or what it is.

16 MR. J. SHEMANCHUK: I'm not sure, but I will just speak
17 for the tests I get. I myself am a licensed pesticide
18 applicator, and I have to go in once a year to get a medical
19 and once a year to take a blood test to follow through on
20 colinestrates level in my blood because I am exposed to
21 organo phosphates pesticides. And that is all that is
22 required is just a medical, not anything special.

23 MR. BILL IRWIN: Bill Irwin; I think there is a
24 problem that when it is referred back it should be looked
25 at. The way the motion is worded, if I go and buy a can of
26 Raid in the store and go and spray it and all of a sudden I
27 get worried and stuff, you're going to have everybody and



1 the levels that you are subjected to might be hazardous if
2 you use a can of Raid a few minutes here and there. Maybe
3 I'm ignorant, there is not the health potential for a
4 prolonged sort of working exposure to the chemical.

5 MR. A. WIRENGA: The response to that, to the original
6 word, was farmers there, but we felt that it was too
7 restrictive.

8 MR. M. MUC: You think that someone using it on
9 a large and sustained scale would identify farmers and people
10 who might have orchards and whoever else. Well, I'm just
11 throwing that out as a sort of an insight that your committee
12 may use.

13 MR. K. HODGINS: Mr. Chairman, I am Ken Hodgins and
14 I am a medical officer with the Sturgeon Health Unit, and I
15 would offer my services to work with the committee tonight
16 to look at these resolutions. I think I know what is trying
17 to be said. I would have to dispute whether public health
18 units are the appropriate vehicle or not. There is only
19 one in Alberta out of the 27 at the moment that does provide
20 an occupational health service. Others have talked about it.
21 There is merit in the idea. At this moment public health
22 units are not geared up to provide an occupational health
23 service. But I don't rule it out. So as I say, I offer my
24 services to the committee if I might be of help.

25 MR. R. RICHARDSON: Thank you. Will you get together
26 then with these two fellows on Resolution 15? I will now
27 go to Resolution 16 on the tabling motion. Is there any



1 more comment? All in favour?

2 (SHOW OF HANDS)

3 Contrary?

4 (MOTION CARRIED)

5 MR. R. RICHARDSON: Now we've gone over all the
6 resolutions. We have five tabled that we will discuss
7 tomorrow morning in the resolutions period: The Number 4,
8 Secrecy in Environmental Affairs; Number 6, Uses of Classes
9 1, 2 and 3 Lands in Alberta; Number 14, Pesticide
10 Applicator Training Program; Number 15, Medical Examinations
11 for Pesticide Applicators; Number 16, Medical Services for
12 Non-Licensed Pesticide Applicators.

13 We will consider these resolutions during the
14 resolution period tomorrow morning.

15 It looks like we finished just about on time; it
16 is according to me 4:58, so I guess it is adjournment time
17 unless someone has something they want to say.

18 I declare the meeting adjourned.

19 (DINNER ADJOURNMENT)

20 MR. PAT SEYMOUR: The evening speaker is Dr. Guy
21 Swinnerton, and he was apparently born in Wales. He
22 progressed to an Honours Degree in Geography in London and
23 his M.A. in Geography at the University of British Columbia,
24 his M.A. Thesis entitled, "Small Farm Function," a study of
25 small farms in the municipalities and lower mainland.

26 Then he went on to become a research officer with
27 the Canada Land Inventory in the present land use sector



1 and land capability analysis sector in B.C., and then he
2 went on to his Ph.D. in land use studies at the University
3 of London. His thesis was entitled "Analysis of the Quality
4 of Agricultural Land Being Converted to Urban Use in
5 England and Wales, A Special Reference the Period 1950".
6 From then he was a principal lecturer in land use studies
7 and head of the natural resources section of a college in
8 Devon which is located on the edge of Dartmoor National Park,
9 southwest England.

10 He is presently an associate professor in
11 recreation resource, planning and management, in the
12 Department of Recreation and Administration, University of
13 Alberta. By the by, he is vice-chairman of the Environment
14 Protection Study Group of the Public Advisory Committee,
15 chairman of the National Provincial Parks Association of
16 Canada, Edmonton Chapter, and his teaching and research
17 interests include the use of rural land for outdoor
18 recreation, park land and managements, planning for outdoor
19 recreation, British-Canadian comparisons, and he is in the
20 process of completing a report on recreation on agricultural
21 land in Alberta, as one of the studies being coordinated by
22 the Environment Council of Alberta into the security of the
23 agricultural land base in Alberta. Guy?

24 DR. G. SWINNERTON: You nearly finished everything I
25 was going to say. Seriously, what I would like to share
26 with you this evening are some thoughts on the opportunities
27 offered for recreation in the rural environment, and to base



1 it in part on the situation here in Alberta, and also to
2 make some comparisons with the British situation.

3 I would like to start off by making reference to
4 a report that came out somewhat 20 years ago by John
5 Goffman (Phonetic) entitled "Megalopolis," which was a study
6 of the urbanized northeastern seaboard of the United States
7 in which Goffman looked at problems of land use in
8 essentially an urbanized area at the regional level. And
9 looking at that problem Goffman suggested that one of the key
10 issues facing the northeastern United States was the fear of
11 running out of space. He suggested that that phenomenon had
12 three components. They were as follows: First of all the
13 fear of running out of agricultural space and therefore
14 running short of food; secondly, the fear of running out of
15 space of living, which was essentially synonymous with the
16 lack of accessibility to work and home desires; and thirdly,
17 the fear of becoming short of access to open space required
18 by the average citizen for informal recreation. Obviously,
19 it is the latter of those three which I will be attaching
20 attention to this evening.

21 Although Goffman was talking about an area in the
22 northeastern United States, I think that even in western
23 Canada where we tend to think of an abundance of land space,
24 we are beginning to face some of those issues.

25 I think indicative of that trend things like the
26 whole question of the annexation question in Edmonton, the
27 problems that have been faced by the respective Regional



1 Planning Commissions in this province as they prepare their
2 regional plans, and also fairly contentious issues like the
3 Blackfoot Grazing Reserve.

4 What I want to do essentially in the time allotted
5 to me is to look at some of the reasons why we might need to
6 look at alternative environments for recreation in the future,
7 what options do we have, and in answering, or hopefully
8 answering that question, to try and suggest some of the
9 reasons why indeed we do have to look at alternatives to
10 providing recreation open space. As I say, I will start off
11 by looking at the Albertan scene, and then I want to take
12 some time looking at the British scene because I think this
13 cross-cultural comparison will be useful from the standpoint
14 of Britain, and more specifically, England and Wales, to
15 which I will address my comments, has had to face problems
16 of the type that they're going to have to face in Alberta in
17 the next 10, 20 years or even prior to that particular point
18 in time.

19 The problem that has already been faced in Ontario,
20 it is noticeable that to a large extent the solution or some
21 of the solutions they are looking towards in that context
22 are ones that have been proven in the British context. I'm
23 not saying that we can transplant them in exact form, but I
24 think some of the principles of the approach are relevant
25 to the Albertan-Canadian context.

26 First of all, let me suggest that one of the
27 convenient ways of looking at outdoor recreation, and one



1 indeed which is well-versed in the recreation literature, is
2 looking at it in terms of outdoor recreation systems. What I
3 mean by that is when we look at recreation we can look at it
4 in terms of demand and supply, and we can, as many of you
5 will well realize, apply economic principles to that. I am
6 not going to do that necessarily this evening, but
7 nevertheless that provides us with a framework for looking at
8 issues indeed in the Canadian context, and in any context,
9 for that matter.

10 First of all, let me have a look at recreation
11 demands. I think it is important to point out that before
12 we look at some of the factors involved in accounting for
13 recreation demand, we should clarify one point. There is a
14 tendency for the average person to confuse the concept of
15 demand with consumption. When we talk about demand, we are
16 talking about really an independent component within the
17 recreation, independent of supply.

18 In other words, we can divide the whole aspect of
19 demand into two component parts, what we can call effective
20 demand, which is really consumption or participation levels
21 in recreation, and we can identify also what we call latent
22 demand. That is demand which exists but can't be
23 operationalized for some prevailing conditions, either on
24 behalf of the potential recreationist, or alternatively,
25 because there is a shortage of supply or the resources are
26 not of the appropriate quality and quantity.

27 If we pursue this demand component a little



1 further, I think most of us are aware that the late '60's
2 and into the '70's, bring what Tim Burton has called the
3 period of mass leisure. What factors have been largely
4 responsible for that trend?

5 First of all, obviously when we think about
6 recreation, we tend to think about people. Therefore, demand
7 to a large extent is dependent on numbers of persons living
8 in the area. If we look at in the Albertan context, which
9 I think is appropriate to do in a session like this, simply
10 the increase in the size of the population has had a
11 profound effect on the growth in outdoor recreation.

12 I don't want to bore you with figures this
13 evening, but I will touch on a few key ones. Let us
14 remind ourself that in 1901, we had a population in this
15 province of 73,000, in 1981, it is estimated that it is
16 around 2.2 million; if we look to the projections for the
17 year 2006, statistics provided suggest we could fall between
18 3.9 and 4.2 million. In other words, we are talking
19 virtually a doubling of the population of Alberta before
20 the end of the first decade of the 21st century.

21 Population obviously in itself, in terms of
22 numbers, is not the whole problem. Another factor which is
23 extremely responsible with regard to recreation is the age
24 structure. One of the characterizing features of population
25 structures in most western industrialized countries is that
26 it is an aging structure. That is certainly true of the
27 United States, it's true of Britain, it's true of Canada.



1 It is true of Alberta to a point. One of the things I think
2 we have to be aware of in the Albertan context is that our
3 population growth is and will continue to be largely
4 dependent on the migration. If you look at that migration
5 factor, the age groups which are predominantly contributing
6 to that migration are in the 20- to 24-year age group, and to
7 a slightly lesser extent, the 25- to 29-year age group.

8 What are the implications of this from the
9 recreation standpoint? Well, if we look at most studies
10 carried out, age is an extremely important factor in
11 determining the types of activities people participate in.
12 In other words, age is a strong determinant of the types of
13 activities which we pursue, not the least of which is
14 because of our physical capabilities. Age is also an
15 indication of social independence. The younger age sector
16 and the more mature end of the age spectrum, we are
17 dependent on other members of society.

18 Now, what one would anticipate with an aging
19 population, participation in most active pursuits would tend
20 to drop off. This is the general scenario for both the
21 United States as a whole and Canada as a whole. The problem
22 is, if it is a problem in the Albertan context, is that we
23 are being augmented by younger people and therefore our
24 participation rate is likely to stay reasonably high,
25 well into the 21st century.

26 Another factor is our changing attitudes to age.
27 In terms of many activities carried on through the age



1 cycle, it is partly a reflection of how we look at the aged
2 and how the aged look at themselves. In other words, there
3 isn't that remarkable drop-off that we might have seen, say,
4 ten years ago.

5 Another factor of population is the geographical
6 distribution, where people locate themselves. If we look at
7 population distribution in Alberta, obviously what stands
8 out is the Calgary-Edmonton corridor. The fact that even
9 Calgary and Edmonton themselves account for over 50 percent
10 of the population, this has important implications in terms
11 of recreation. It means that we are tending to concentrate
12 our population in urban areas. And therefore that lemming-
13 like pattern which we express on Friday afternoons to escape
14 out into the countryside to escape the urban turmoil is not
15 likely to decline but in fact increase.

16 It also means that we have got fairly selected
17 areas of pressure on our countryside in relation to those
18 areas of concentration in terms of population.

19 Another important factor of our population is the
20 rural-urban breakdown, and it seems fairly substantive
21 changes with regard to that rural-urban breakdown; we are
22 roughly at a 50/50 break in the early 1950's. By 1976, 75
23 percent of our population was urban, 25 percent was rural.
24 Perhaps what is more important, however, in relation to
25 recreation, is that of that 25 percent rural population,
26 10 percent is farm and 15 percent is non-farm.

27 Now the implications of that for recreation is



1 that whereas in the past many people living on farms had
2 direct access to their own farm land for recreation, that is
3 becoming a much less common practice. In other words,
4 people don't have "their own open space" as they did in the
5 past.

6 The other problem is that as we become more
7 removed in time and space from the rural environment from
8 the agricultural areas, an increasing proportion of the
9 population are less cognizant of agricultural practices,
10 behaviour norms, in the countryside. So we have a problem
11 with education.

12 The second major factor in terms of demand is the
13 whole question of discretion with time. In other words, the
14 time that is unobligated, or what we might refer to as
15 leisure time. For the most part, that is increasing, and
16 what is more important, is the fact that those periods of
17 leisure time quite often are coming in major blocks of time
18 such as the two-week vacation, three-day weekend, and things
19 of that nature. It is during those extended time periods
20 which we tend to make greatest use of the countryside, of
21 the rural areas.

22 It is important to bear in mind that that
23 disposable time is extremely important in explaining our
24 leisure habits because, for the most part, leisure time comes
25 in fragmented units; something like 20 percent or less than
26 20 percent of our leisure time is actually spent away from
27 our immediate environment, or out in the rural environment.



1 Another factor which is important in terms of
2 recreation demands is that of education. All of the sort
3 of socio-economic factors which we attach to populations,
4 that is income, occupational prestige, education is by far
5 the most important determinant on its own right. There
6 tends to be a strong relationship between levels of
7 participation and levels of education, and it doesn't need
8 me to tell you that by and large an increasing proportion of
9 the population is going into advanced educational post-school
10 education of some sort. Whether it is in technical colleges
11 as opposed to universities is not entirely immaterial, but
12 it is certainly education.

13 A further factor is economic characteristics, and
14 particular important are things like disposable income.
15 That has largely increased through the '70's till we are now
16 reaching a point where inflation is, if you like, eating
17 into that disposable income. We really don't know too well
18 at the moment exactly how we are going to respond to that
19 situation, although some American recreation planners are
20 suggesting that because of inflation, because of the cost of
21 participating in many forms of recreation, the 1980's may
22 well be the decade when we really demonstrate how committed
23 we are to leisure and outdoor recreation.

24 Obviously, in terms of outdoor recreation,
25 mobility is an important factor. In this regard, I think
26 it is true to say that our recreation behaviour patterns in
27 Canada and the United States, and to a lesser extent many of



1 the other western industrialized countries, is based
2 largely on a high degree of personal mobility, and a
3 plentiful supply of inexpensive gasoline.

4 In terms of car ownership, if we look at the
5 Albertan context, even during the period 1969 to 1979, the
6 number of cars in Alberta almost doubled. That is partly
7 obviously a factor of population. If we express that
8 dimension in a ratio term, we would find that whereas in
9 1969 there was 309.4 cars per thousand population, by 1979
10 that had increased to 471.6 cars.

11 Now it is all very well having the hardware to
12 get out into the countryside, we obviously have to pay to
13 operate it. Certainly the increase in gasoline prices
14 during the '70's, and particularly during the last part of
15 the '70's, has had an important effect. The trouble is,
16 all the studies that have been done in Britain, the United
17 States and the few that have been done in Canada are not
18 particularly conclusive one way or the other. Where there
19 would seem to be four alternatives which we can or might
20 see with regards to gasoline increases in price, and I
21 appreciate that in Alberta we are somewhat cushioned
22 relative to the United States, probably.

23 The four options are as follows: First of all,
24 we might see the change in activities' space reduction.
25 What I mean by that is the fact that we choose sites closer
26 to home to recreate. Secondly, we might change what is
27 referred to as activity mode. By that I mean a change in



1 actual vehicles used, perhaps smaller cars, the use of
2 public transportation. Thirdly, there is the question or
3 the option of activity frequency reduction. We simply make
4 fewer trips. Finally, there is the whole question of
5 activity change - substitution of activities which we as
6 much as possible cut out the mobility factor as much as
7 possible.

8 So those are some of the factors of demand. I
9 think it is true to say that the traditional ones of
10 population increase, disposable income, age, mobility, which
11 we used during the '60's, are much more difficult to apply
12 now in the '70's. We are in a much greater period of flux;
13 we simply don't know how things are going to work out.

14 I've said that certainly from the American
15 standpoint they are somewhat advanced from Canadians with
16 regards to research. They have suggested that we could
17 well see a levelling off in certain aspects of recreation,
18 certainly a period when people begin to really show whether
19 or not they regard recreation as an important part of their
20 lifestyle.

21 Let me just say a few things about participation.
22 Obviously, there are reams of studies and statistics, and
23 at this time after a heavy day, I do not intend to bore you
24 with those. It is important to point out one or two, I
25 think, if we for example look at the changing trends over
26 time and look at them from the point of view of levels of
27 participation per thousand population. We take tent camping



1 as an example and use the western region as our base; these
2 are part of Canada's statistics, but essentially Alberta and
3 British Columbia. In 1967, the ratio was 192 persons over 18
4 per thousand participating. By 1976, that had gone up to
5 243.

6 We look at, say, walking or hiking for pleasure;
7 comparable statistics over the same period would be a ratio
8 of 148 per thousand in 1967 and an increase to 535 over a
9 thousand by 1976. So we are looking at fairly appreciable
10 increases in demands.

11 If however we look at the latest statistics
12 acquired by Alberta Recreation and Parks from their survey,
13 what we'll find is that for the most part high levels of
14 participation activity are found in those types of
15 recreational activities which are not particularly demanding
16 physically and intellectually. That still tends to be a
17 pattern, still tends to be true for Britain and the United
18 States.

19 So that whereas for example watching T.V. comes
20 out at a rate per thousand of 825 per thousand, something
21 like hunting is as low as 120 per thousand, and we have
22 obviously a range in between. But by and large, activities
23 where we get high participation rates are things like driving
24 for pleasure, walking, camping and fairly passive activities.
25 If anybody wants to have other statistics, they can talk to
26 me later, but as I said, I don't want to bore you with
27 those.



1 Basically, the situation is that although we talk
2 about mass leisure, we are talking about the opportunities
3 for a lot of involvement, not necessarily that everybody is
4 scurrying around participating in recreation.

5 On the other hand, it is true to say that there is
6 an upgrowth in involvement in those activities which require
7 commitments and which are of an outdoor nature.

8 Let's now turn to the whole question of supply,
9 the other side of the system, for a moment. Here again, I
10 think it is important to distinguish between two terms which
11 quite often are not clarified as well as they might be.

12 When we talk about recreation supply, we are
13 talking about an absolute measure, we are talking about an
14 inventory of what exists, be it parks, riverbanks, mountains,
15 what-have-you. A far more realistic measure is what we
16 might refer to as recreation opportunity. What I mean by
17 that is effective supply, a relative concept to demand.

18 The important thing here is that the same
19 recreation resource offers different levels of opportunity
20 to different people, because of accessibility, because of
21 income factors, because of awareness.

22 Two other aspects of resource, I think, are also
23 important to clarify at this time. First is that there is
24 nothing really in the environment which is a recreation
25 resource inherently. What makes it a recreation resource is
26 that we as a culture wish to make use of it and are capable
27 of using it correctly. So we talk about a bio-cultural



1 interpretation of resource, a dynamic concept which changes
2 over time. So what might be a recreation resource at one
3 point in time, might not necessarily be at another. Likewise
4 what we basically forget about and put on the side as a
5 recreational resource at the moment, could well become one
6 at a future point in time.

7 The other point with regards to resources is
8 traditionally we have regarded resources as basically
9 providing commodities which can be directly measured in
10 economic terms. Increasingly we are thinking about amenity
11 resources. In other words, the quality of the environment,
12 landscaped valleys, the non-consumptive quality of wildlife,
13 the character and quality of open space.

14 Those are important to bear in mind, and I will
15 come back to them later on. Let's turn to the supply factor.
16 Obviously, we might say that the total environment offers
17 opportunities for recreation. But if we look at measures of
18 recreation value, and here we have to resort to the survey
19 of the Canada Land Inventory to look at that, it, as many
20 of you are familiar with in terms of agriculture, did
21 likewise for recreation, rating land on a basis of a scale
22 from 1 to 7, 1 being the highest and 7 being the lowest.
23 If you look at the situation in Alberta, less than 0.5
24 percent of the mass area of Alberta falls within the first
25 three classes of the Canada Land Inventory. That is
26 somewhat misleading because that classification was based
27 largely on the quantity of recreation that could be



1 provided and supported by a particular area; it does not
2 really give a measure of quality.

3 But nevertheless, it means that if we look at
4 recreation resource from a Canada Land Inventory standpoint,
5 we have to be cautious in using it as our only guideline.
6 Here again, I will come back to this point later on.

7 Another factor of supply is what is the present
8 land use of the province with regards to recreation. If we
9 look at areas that are officially designated as recreational
10 land in the province, we are looking at something like 9.5
11 percent of the area; it is not a great deal. That excludes,
12 I should point out, areas of recreation land included
13 within the urban area. Nevertheless, it is still a very
14 small portion.

15 The factor which is important in qualifying that
16 is that over 86 percent of that recreational land occurs
17 within our National Park, with the exception of Elk Island
18 which obviously is spatially divorced from the major sector
19 of the population, except possibly for Calgary to a limited
20 extent.

21 Even if we add on, of that 9.5 provincial parks
22 account for just under 5 percent, as a point of interest.
23 The other important thing is that most of those areas given
24 over to recreation tend to be nodal features; in other
25 words, they are not linear features offering opportunities
26 for different recreation.

27 Obviously, a large part of the recreation



1 activity in this province and in the other parts of Canada,
2 as well, for that matter, take place outside the formally
3 designated recreation areas. Taking place has integrated
4 subsidiary uses, multiple use; call them what you will.

5 So here we are very concerned with the management
6 of that land by land managers, land owner, who is not
7 excessively oriented, or necessarily oriented, to recreation.
8 That leads me on to another qualification in terms of
9 availability of land for recreation, and that is the
10 ownership of land.

11 By and large, I think it is true to say that land
12 in public ownership should, theoretically at least, offer
13 greater opportunities for multiple use, greater access, and
14 certainly the social values and the amenity values in terms
15 of land use decision-making. On the other hand, if we look
16 at private lands, there tends to be at least to be pointed
17 towards the more economic considerations.

18 In this Province of Alberta we have substantial
19 areas of public land, as we are well aware, in the green
20 zone, to a lesser extent the yellow zone, and even in the
21 white areas. The problem is, however, in the white areas is
22 where the bulk of our population exists, and that vacant
23 public land accounts for about 2½ percent. In other words,
24 although we have public land, it is not particularly
25 strategically placed for recreation, and certainly in terms
26 of expansion of our park systems.

27 Another problem, or another factor, in terms of



1 the supply side is obviously that of accessibility. That can
2 be broken down into two component parts. One, the actual
3 distance of getting to that resource base, and secondly,
4 there is the question of accessibility in terms of right of
5 access and the legal use of that land. And I don't intend to
6 get into that in any great detail, but I'm sure you're all
7 aware the press that has been receiving of late.

8 In other words, what we have to work towards if we
9 are going to marry up that demand and the supply side, is
10 something we might refer to as current recreation open space
11 system. Now the problem here is that although only 10
12 percent of our area of the province is given over to
13 designated recreation areas, there is a multitude of
14 components involved in making up that 10 percent. So we
15 have some problems in rationalizing and planning on a
16 comprehensive basis that recreation open space system.

17 Could I perhaps have the slides now.

18 If we look at the recreation open space system in
19 this province, we can see a number of component parts, the
20 dilemma always being the balance between conservation and
21 development. This is true in our National Parks, and
22 opportunities for extensive outdoor recreation where the
23 intrinsic value of the land space is extremely important to
24 areas like Elk Island where it is much more urban
25 orientation of the parks, or certainly nearer the concept.

26 The same dilemma occurs with regard to our
27 provincial parks - Dinosaur Provincial Park, a world heritage



1 site with an important component with regards to the
2 conservation role, as compared to, say, Rochon Sands, which
3 is a more recreation-oriented type of activity.

4 We also have within the province at the wilderness
5 end of the continuum, are wilderness areas of White Goat,
6 Ghost River and the Willmore Wilderness area. We also have
7 natural areas and ecological reserves, and I just
8 unfortunately could not find any of my slides that related
9 to those in Alberta, so I put this in to remind ourselves
10 of the importance of that, and as I am sure you're well
11 aware, the Wilderness Act is currently being considered with
12 amendments to include natural areas and ecological reserves.

13 There is also the whole area of integrated land
14 use in green zones where recreation is incorporated within
15 a variety of different forms of land use, of which
16 recreation is one of the eight zones identified. This is
17 where we come to look at recreation areas. Here again, we
18 have confusion, the fact that within the province we have
19 essentially four types of what we call recreation areas:
20 The recreation area within the provincial park
21 classification; there is a recreation area with regard to
22 recreation areas program which was announced earlier this
23 year for developing and upgrading small parks in rural
24 municipalities; we have recreation areas in the green zone
25 administered by the Alberta Forest Service. Carson Lake
26 is one, although it has now been upgraded, if that is the
27 right term, to provincial park status. We have areas like



1 the Brazeau Reservoir for recreation areas, potential for
2 developing those further, and then we have the provincial
3 recreation areas which they have a variety of types, not
4 least some of them being the former transportation areas of
5 campsites, roadside campsites, throughout the province.

6 It always amuses me, this one at that particular
7 site on Highway 16 where it has got accommodation or period
8 of stay not more than 14 days; to be perfectly honest, I
9 would find it difficult to stay there for more than 14
10 hours.

11 The other type of areas are the recreation
12 countries - Kananaskis, case in point. We have talked about
13 the lake country, and more recently in the press, we have
14 had reference to the David Thompson country. Certainly they
15 are opportunities which will no doubt develop in the future.

16 Then we have got the whole areas of open space in
17 our urban communities. Some of them are parks of various
18 types, certainly providing useful focus. Those are
19 therefore the kimonos of our outdoor recreation open space
20 system. What are some of the problems, then, that relate
21 to these?

22 One of the issues, as I said before, is the whole
23 question of do we go for conservation or development. This
24 is one of my favourite ones, being a Ziggy fan, and I don't
25 know if you can read the caption at the back there, but
26 basically he is heading for a day out for the open road, and
27 cool mountain streams, the natural environment, and he ends



1 up at Paradise Falls. I don't know whether that is the
2 Odyssey project or not.

3 The other problem is much more localized; this is
4 concentrations of users at selected spots in the Maligne
5 Canyon, and the problem of erosion and the need therefore to
6 modify or harden the environment to accommodate these levels
7 of use.

8 Also, as a factor of levels of use, quite often
9 vandalism becomes a problem, so that for many people the
10 quality of the recreation is being spoiled by this level of
11 use.

12 Another problem that we have to face increasingly
13 are those uses which we have traditionally thought of as
14 being incompatible. Whether we like it or not, we have to
15 recognize that four-wheel drives, snowmobiles, trail bikes,
16 are just as legitimate recreation uses as some of our more
17 conservation-oriented ones. That might seem a little
18 strange from somebody like myself, who is Chairman of the
19 National Parks Association, but I think at some point in time
20 we have got to recognize that we have to provide a range of
21 opportunities for recreation. We can't afford to be elitist
22 or that approach is going to backfire on us. We can't keep
23 shifting those types of uses into somebody else's backyard.
24 This has been a tendency by provincial parks, and numerous
25 other agencies, to tend to be elitist in approach, or have
26 been historically, at least.

27 We have the problems of what we might call more



1 risk activities: Hang-gliding, although that is probably
2 not too good a one in the Edmonton area, but it is a type
3 of activity; river rafting, and here again you get conflicts
4 between that and whitewater canoeing. We have got
5 conflicts within the recreation centre as well.

6 Then obviously, we have got this whole problem of
7 increasing urbanization, and that need to escape, and the
8 movement further away of the rural areas from where we live.

9 We have also got the whole problem of what
10 happens to these people now if we have an increase in energy
11 costs; where are they going to go? That just gives you an
12 indication of the reliance on transportation in terms of
13 our recreation behaviour patterns.

14 Another problem, as I said, is the fact that most
15 of our recreation areas tend to be nodal, and at some point
16 in time we are going to have to face the fact that an
17 increasing number of people want to participate in
18 backpacking, canoe trips and so on - linear orientation.
19 Although this has been looked at by the provincial
20 government, and indeed many of the Regional Planning
21 Commissions make reference to the need for linear
22 recreation opportunities, we really haven't gotten to grips
23 with this problem to date.

24 The other problem, now, is really how do we solve
25 some of these issues. Traditionally, when demand has
26 increased, we have acquired more land for recreation. The
27 problem here is one, the fact that where the people are



1 and where we want the convenience of parks is in the white
2 zone, where we have a relatively small proportion of public
3 land, so that the acquisition of land is going to be more of
4 a problem than it was in the past. There is the problem of
5 cost, and this is a problem that we will be competing with
6 the private sector in terms of getting preserved sites like
7 on Pigeon Lake; a lot of the lake frontage is already given
8 over to cottages and further development is at hand.

9 So we might well have to look at alternatives to
10 fee simple or direct acquisition, and go to various forms
11 of leaseback or acquisition and coming into development
12 agreements. There is also the problem, obviously, in terms
13 of acquisition of the political overtones.

14 If we look at another alternative, and if you
15 remember one of our resolutions today addressed this in
16 part, that is the use of private land. Because for the most
17 part, private land occurs around our urban areas, and we
18 have already got a problem which is well documented in the
19 States, a little less so here in Canada. But with the fact
20 of increasing demand, increasing levels of use, the land-
21 owner, quite understandably, is much more reluctant to allow
22 the public on his land. So we have no trespassing signs,
23 posting against hunting, and so on. So we really need a new
24 approach here to the problem of public access to private
25 land.

26 The concern of the landowner, not surprisingly, is
27 related to the whole question of the compensation and



1 liability. As we stand at the moment, there is little
2 incentive for the private landowner to make those provisions,
3 not least of the problem is the variety of pieces of
4 legislation that we have which apply not only to the private
5 land sector but more particularly to the public land and
6 grazing leases and things of this nature.

7 In other words, we need, I think, a fairly major
8 education program, both with regards to the landowners, make
9 them recognize that not every urbanite is a villain at hand
10 and is there to destroy, but at the same time we have to
11 educate our urban population to some of the normal and
12 accepted values of the countryside and behaviour patterns
13 that are acceptable in those areas.

14 I think another opportunity lies in the whole area
15 of regional parks, something which we have talked about for
16 a number of years in Alberta. We have the component parts
17 in terms of provincial parks, municipal parks, but we have
18 yet to integrate it into a comprehensive system. Unlike
19 Alberta, in B.C. they have had a Regional Park Act since
20 1965; I think we could learn a lot from looking at the
21 greater Vancouver areas regional park system, and the
22 regional park system in Victoria on Vancouver Island.

23 Another area which needs addressing is the whole
24 question of rural-urban fringe. That is the area which it
25 is difficult to draw perimeters around, or precise
26 parameters, but certainly within the 20-mile range or
27 something like this. The problem here when we look at it



1 from a planning perspective, is that when we look at the
2 Canada Land Inventory map, I don't know if you can make this
3 out, but here in Edmonton, Cooking Lake, Elk Island, Beaver
4 Lake, when we look at the Canada Land Inventory ratings, our
5 recreation ratings are not particularly high, certainly
6 relative to, say, parts of Kananaskis and some of our
7 mountain areas. The problem that could well happen here is
8 that we do not appreciate the value of this land because of
9 its accessibility to the urban population. So it might not
10 be valuable in an absolute sense, but it is extremely
11 valuable in a relative sense. It also has the problem that
12 it is the area most vulnerable to change, to urbanization.

13 One of the greatest problems, to, I think,
14 recreational agricultural land in the province is acreage
15 development, and I think we can find a lot of justification
16 for suggesting that a lot of acreage development is really
17 a recreational form of land use. The motives, why people
18 buy those acreages, are almost identical to the motives of
19 why they recreate in certain types of activities. They are
20 extremely land extensive, and the other component is that
21 land which is attractive to the acreage developer is also
22 attractive for recreation. So what we are doing here is
23 essentially private landowners or private acreage developers
24 acquiring their own five acres or what-have-you of private
25 open space at the expense, in the longterm, possibly, of
26 the establishment of public recreation open space in these
27 areas.



1 The other complication is that the attitude of
2 these landowners are much more protectionist to that land
3 than the former landowner. This has been well documented in
4 the United States and eastern Canada. So that whereas in
5 the past the farmer was probably reasonably amenable to the
6 occasional snowmobiler, cross-country skier, backpacker,
7 horse rider, going across that land, that has radically
8 changed in most areas.

9 Another opportunity, I think, which we need to
10 make use of in the rural-urban fringe is that of
11 environmental reserves. Most of you are aware that when land
12 is sub-divided, a certain proportion of the land goes to
13 school and municipal uses. Also, areas which are not suitable
14 for development are left as environmental reserves. I think
15 it is true to say that in the most part the opportunities
16 for recreation afforded by these natural areas haven't
17 really materialized. Instead we have environments like that,
18 and that is within the City of Edmonton on an environmental
19 reserve creek.

20 I think the other thing which is important about
21 the rural-urban fringe is the visual quality, the amenity
22 value of the countryside. Here we see a proliferation of
23 signs which certainly doesn't add to the visual
24 attractiveness. It even, within virtually five minutes'
25 walking time of the west end of Edmonton, we can find
26 landscapes like that which I suggest are, from a visual
27 standpoint, attractive and certainly provide an alternative



1 to highrise development.

2 Alternatives also to using the rural-urban fringe
3 are tourist destination areas. Many of you might well be
4 aware that Travel Alberta has sponsored five studies to date
5 looking at alternative areas for recreation in the province,
6 southeast, southwest, west central, northeast and the
7 Grande Cache area, looking, then, at opportunities for
8 providing recreation destination areas which would perhaps
9 take the pressure off some of our more established
10 recreation areas, most notably the National Parks.

11 I think I would like to offer one word of
12 warning here. This is the fact that we are going to develop
13 recreation opportunities in those destination areas, and
14 they have to be compatible with the existing lifestyle and
15 the environment. I think there is a tendency in the
16 province, which is relatively affluent with Heritage Trust
17 money, to think that we have to go to major forms of
18 development for recreation, major structures. It is the
19 activity, the experience, which is important, not the
20 structure, in terms of recreation.

21 The other alternative, and obviously these have
22 to be complemented one with each other, is the improvement
23 of the urban environment. If people are leaving the urban
24 environment to escape, then perhaps part of the answer is
25 improve the urban environment itself through what are
26 called vest pocket parks like this, to break the urban
27 monotony. Capitol City Park in Edmonton, as many of you



1 might well be aware, the province has extended that program,
2 not only Capitol City but Fish Creek in Calgary, the Cities
3 of Lethbridge, Medicine Hat, Red Deer, Grande Prairie and
4 Lloydminster. So that parts of the solution lie there.

5 What I think is important also is the improvement
6 of other parks within the city. These are ones in Edmonton,
7 Beaver Hills, Paul Kane, which provide useful opportunities
8 for recreation. I think the important thing as far as
9 Alberta is concerned and Canada at large is concerned is
10 basically a change in attitude to what is recreational
11 opportunities. Instead of thinking of recreation solely as
12 specific recreation areas which can be earmarked on a map,
13 we have to think of the recreation opportunity including the
14 experience of history, indigenous landscapes, rural
15 atmosphere, as well as the natural landscape. That is why
16 I particularly wanted to turn and look at the British
17 situation.

18 Before I do that, however, I think there is one
19 problem in the Albertan scene, and that is the vast
20 multitude of agencies in the government which is involved in
21 recreation. Obviously, recreation in parks is the major one,
22 but there are other ones that have secondary and tertiary
23 mandates with regards to recreation, notably agriculture,
24 small business, environment, energy and natural resources,
25 municipal affairs, culture, to name a few. The problem is
26 that the delivery, then, of our recreation opportunities is
27 in many instances through agencies whose mandate is not



1 specifically recreation. I suggest, although I might be
2 open to question, whether or not their primary interests are
3 therefore in recreation.

4 Let me now turn very quickly to the British scene.
5 The reason why I think it is useful to look at Britain is
6 the fact that the problems that it has had to face in
7 establishing national parks and other recreational
8 opportunities could well provide some of the basic
9 principles and general approaches which we might want to
10 adopt here in Canada. As I say, Ontario, the lower mainland
11 of B.C. and other parts of British Columbia, notably
12 Vancouver Island, are already picking up some of the
13 approaches which have been used in Britain, and also on the
14 continent, notably Germany, the Netherlands. In other
15 words, those slightly more developed countries in terms of
16 population numbers.

17 Before I look at the national parks in Britain,
18 very quickly, I think there are one or two points I would
19 like to make which I think is important to recognize before
20 we look at the park systems themselves. There are
21 obviously major differences between Canada and Britain on
22 a number of points. Not least is the fact of the man-land
23 ratio. Without giving a lot of statistics, we can get some
24 idea of the different relationships if we think of Britain
25 from the point of view of having an area, if we restrict
26 ourselves to England and Wales, about a quarter of the size
27 of Alberta, with a population of around 50 million. The



1 other factor is that there is really no part of England
2 and Wales which is more than 75 miles away from the coast,
3 so that historically and contemporarily, the coastal areas
4 provide a large number of opportunities for recreation.

5 The other factor with regard to the British
6 continent countryside or British environment is that it is
7 largely manmade. It is a functional management resource
8 significantly modified by man over the centuries. So that
9 when we talk about the natural landscape in Britain, we are
10 talking about natural in a relative rather than an absolute
11 sense.

12 Another important factor is that there is a
13 general absence of public or Crown land. If we look at
14 England and Wales, something like 15 percent of the total
15 area is what we might call public ownership, and even within
16 the national parks, it only goes up to about 18 percent.
17 But even within our national parks in Britain, the land is
18 predominantly in private ownership.

19 The other factor is that it is virtually
20 meaningless in Britain to consider acreages of recreational
21 land, because for the most part, recreation occurs as a
22 secondary form of land use on an alternative land base.
23 And therefore in a situation like this, the key question in
24 terms of how well recreation survives and how it is
25 developed is really how it is managed, the natural practice
26 of land use.

27 In other words, then, when the national parks were



1 established, they were superimposed on already manmade
2 landscapes, and as a result, none of the national parks in
3 England and Wales are included within the United Nations'
4 list of national parks and equivalent reserves.

5 The other factor is that Britain as a whole, and
6 I will concentrate on England and Wales nevertheless,
7 something like 42 percent of the land areas has some form
8 of conservation designation on it, either because of national
9 parks which are these green areas - the pink areas probably
10 to you are areas of outstanding natural beauty, and I will
11 tell you about those in a moment - areas of green belt
12 nature reserves and so on. But despite that fact, despite
13 the fact that 42 percent of the areas have some sort of
14 conservation designation on it, only about 8 percent of the
15 land areas could be said to be effectively in recreation
16 use.

17 The other problem that relates to that is the
18 fact that even though we don't have a large area of
19 recreation land in a specific sense, many of the traditional
20 land uses such as agriculture and forestry have built into
21 their mandates a strong concern for amenity and providing
22 recreation opportunities. To try and expedite some of the
23 things I was going to say, I will rely largely on slides
24 for the next section.

25 What happened was that in 1949, we had the National
26 Parks and Access to the Countryside Act, and I stress the
27 Access to the Countryside Act. The black areas are the



1 national parks which are ten; the slightly lighter areas are
2 areas of outstanding natural beauty, and you might be able
3 to make out some dotted lines which are long-distance
4 footpaths, and I will come back to those in a moment.

5 Just to give you some idea of the character of
6 these national parks, as I say, they are a manmade
7 landscape. This is part of the Lake District National Park.
8 These are all established; the ten national parks were
9 established between 1951 and 1957. This is the Snowdonia
10 National Park in Wales. This is the Breken Beacons National
11 Park, and I showed this one obviously to show the strongly
12 humanized landscape of the park system. Only one really
13 essential coastal park, the Pembrookshire National Park in
14 the southwest of Wales. Areas of outstanding natural
15 beauty were areas which really didn't have the extensive
16 naturalness in a relative sense as the natural parks, and
17 therefore might be regarded as a lower tier, if you like,
18 of national parks.

19 Also established by the National Parks and Access
20 to the Countryside Act are the nature reserves where the
21 emphasis, as the term would suppose, would be the retention
22 of certain natural habitats. It also provided an important
23 factor, and that was the access to open country, and this
24 is in the Peak District National Park.

25 I think it is important to remember that in this
26 park it has something like 400,000 people living within the
27 area. It has a visitor level of 20 million a year, and it



1 is in a day's driving time of well in excess of obviously
2 that number. And that is not unique to the other national
3 parks. Dartmoor National Park, where I lived for a number
4 of years, has an area of 365 square miles, and has a
5 visitor level of, in those days in the '70's, something like
6 8.5 million. In comparison, the visitor level to Banff is
7 just over the 3 million mark.

8 Other areas were national trust land and certainly
9 part of the National Parks Act was to provide indications
10 of where people could walk on this land. So that what was
11 required of local authorities was the establishment of
12 definitive maps where public access was allowed. I think I
13 should point out that one of the advantages that Britain
14 has, or England and Wales has, was that it had a public
15 footpath system which goes back to Norman times, and offers
16 something in the region of 100,000 miles of public footpaths
17 in England and Wales. So we have a system in Britain
18 which really couldn't be replicated at this time anyway.
19 It is just a fortunate thing of nature, or of historical
20 development, cultural development. These have been
21 improved to provide access through agricultural areas in
22 national parks and other areas.

23 Another important factor which I think might be
24 worthwhile considering in the Albertan context is the
25 developing of a warden service, not solely in the national
26 parks, but in areas where you are likely to get fairly
27 intense pressures of recreational use. So that many local



1 authority areas now have wardens throughout their areas.

2 The other important thrust was called a country
3 code, a set of statements to provide guidelines against
4 deviant behaviour of various forms in the countryside. This
5 is not only an act of vandalism, but quite often out of an
6 act of ignorance more than anything else.

7 When the national parks in Britain were
8 established in 1949, or the National Parks Act in 1949, I
9 don't think people had any inclination of the level of
10 recreation use which would come by the '60's, and so by the
11 early '60's, we had problems of this type on the major
12 highways. We had the informal use of the countryside quite
13 often with some conflict with adjacent agricultural areas.
14 So what was established in 1966, published in 1966, was a
15 white paper on leisure in the countryside. Basically what
16 this white paper suggested was a much broader mandate for
17 looking at recreation in Britain. It was given substance
18 in the 1968 Countryside Act, and established something
19 called Countryside Commission, and the main function of
20 the Countryside Commission, I will just quote this one:
21 "The main function of the Countryside Commission is to
22 encourage and assist other bodies and individuals in the
23 management of the countryside to enhance amenity and
24 improve the provision of recreation facilities."

25 One of its major thrusts was the establishment
26 of country parks. What these were, and the black areas I
27 should perhaps indicate on the slide are the urban areas,



1 was to provide alternative recreation environments to people
2 of the cities, alternatives to going out to agricultural
3 land, alternatives to making considerable distances in the
4 British context, at least, to the national parks. In other
5 words, they were intervening opportunities to siphon off
6 some of the levels of use, and to date there is something
7 like 144 country parks in England and Wales, the vast
8 majority of them provided by public authorities, some of
9 them also by the private sector.

10 Just to illustrate the -- before I illustrate
11 those country parks through slides, this is a diagram to try
12 and illustrate the diveristy of opportunities for recreation
13 which one could conceivably find around an urban colonization.
14 As you can see, forest parks, national parks, country
15 parks, scenic routes, special conservation areas. A system,
16 a hierarchy of recreational opportunities. Obviously the
17 scale of that is very compressed to try and get them all on.

18 Country parks provide a variety of different
19 settings. As you can see by the sign, this is one actually
20 within an urban authority which includes impressive limestone
21 cliffs, a fort providing them interdependence of a cultural
22 landscape and a natural landscape.

23 This is one in the Snowdonia National Park; it
24 looks like something out of a set for the northwest frontier,
25 in fact it is an old slate works and it has been developed
26 as an interpretive centre and providing opportunities for
27 picnicking. This one is actually within the national parks,



1 and it takes off some of the pressure on the more fragile
2 areas.

3 This is one of the head waters of the Thames,
4 Cotswold Water Park, where they are using extensive areas of
5 gravel workings for recreation, and you can see here the
6 combination of the actual gravel workings plus this
7 particular lagoon area being used for canoeing. Some areas
8 are nature reserves, others have got the equivalent almost
9 of second homes on them. This is a private example of a
10 country park, the Wellington Country Park in southern
11 England. I don't know if you can make out perhaps in the
12 back the types of activity that are provided, model boat
13 sailing, sailing dinghies, canoes, fishing, nature trails,
14 children's play area, camping, Waterloo Meadow where they
15 recreate the Battle of Waterloo, plus other activities.

16 One of the other important contributions of the
17 Countryside Commission is that it can provide monies to
18 other sectors to provide recreational opportunities. This
19 is one provided by the Forestry Commission, the State
20 Forestry in Wales. This is a new reservoir which has
21 provided opportunities for recreation, funded in part in
22 terms of walking trail development by Countryside
23 Commission, by the National Government.

24 This is part of the long-distance footpaths
25 around the southwest coast of England, at this point in
26 time obviously using an old road, but a lot of it is in a
27 lot more natural landscape.



1 Other areas which are being used are linear
2 features. Britain has something like 2,000 miles of natural
3 waterways, canals, which were part of the industrial
4 evolution, and so that they have had important aspects for
5 boating and walking.

6 Another aspect are railway lines. We might make
7 use of these in Alberta. These are in North York National
8 Park, where a former railway grade is being used as a
9 walking and cycle trail and a horse-riding trail. The local
10 railway station has been turned into an interpretive centre
11 and information kiosk area.

12 Forest drives through the forested areas providing
13 opportunities for explaining forestry and recreation
14 opportunities.

15 The other areas in the use of farm-based
16 recreation. Something like 12 percent of the farms in
17 England and Wales have recreation on them. When we get to
18 the preferred areas of farms within national parks, the
19 holiday areas, that can go up to anything like a third of
20 the farms involved. Some of them are campsites, others are
21 much more of an interpretive context. This is one on the
22 edge of a holiday area in southwest England where there is
23 farm trails, explanation of farm practices. So that you
24 are explaining to the urban dweller the significance of
25 the farm environment, and at the same time, providing
26 recreational opportunities.

27 The important thing here in terms of these farm



1 opportunities, both the Countryside Commission plus the
2 National Farmers Union and the Ministry of Agriculture,
3 have been extremely positive in encouraging this type of
4 development. And they also grant aids to enable the
5 development of these recreation opportunities. To give them
6 their due, I should point out we have a farm education
7 program here in Alberta; it used to be operated out of
8 Alberta Agriculture; it now comes out of Travel Alberta, and
9 it would seem to me that we have a longterm opportunity for
10 that in Alberta to develop that particular concept. At the
11 moment, I think, in time perhaps we are not far enough
12 removed from our rural heritage to appreciate some of the
13 types of vacations. But they are certainly developing
14 packages, and Manitoba has a very flourishing farm vacation
15 program.

16 Don't blame these on myself, this is using the
17 ECA carousel.

18 This is another example of a farm which because
19 it is within a development area got grants to develop an
20 interpretive centre. This particular farmer had one of the
21 best selections of old agricultural artifacts that I can
22 recall ever seeing, and also, he was back-breeding livestock
23 to get back to the original farm stock.

24 We have our zoos which have been developed on
25 farms. I suppose we have our equivalents here in Alberta
26 on a slightly grandiose scale. This is another component
27 of recreational use which fits into the rural environment.



1 Finally, bed and breakfast farm accommodation is
2 another important component.

3 One of the problems, I just want to round off on
4 this. One of the problems that one has in the national
5 parks in Britain is because they're in the upland areas,
6 agriculture has gone into something of a decline in terms of
7 numbers in the labour force and we have increasing levels
8 of use. So what the Countryside Commission has done is to
9 establish upland management experiments which have been
10 longterm experiments monitoring how best these areas can be
11 maintained as a recreation environment, because it is the
12 farm landscape that is a large attraction to the visitor.
13 This is in the Lake District National Park, and the other
14 area is in the green belt; this area is on the edge of North
15 London, and what the idea is is to have almost a
16 troubleshooter in these areas partly sponsored by the
17 national government, partly by local authorities. And so
18 where you have problems of vandalism, fences broken down,
19 this person acts as an immediate repairer of those types of
20 problems.

21 Footpaths are a particular problem between the
22 pedestrian and the horse rider. You can just make out on
23 the horizon the northern outskirts of London, in fact, on
24 the outside of that slide.

25 Improvement, what has happened in some of these
26 areas where you had a conflict between the pedestrian and
27 the horse rider, you get trails like this, and one of the



1 things that would be done as part of this management
2 experiment would be the upgrading of those trails on the
3 edge of the urban environment, providing immediate access
4 out into the countryside by the urban dweller.

5 Here is another example where there has been
6 conflict in this particular farmer's field because of
7 pedestrians and horse riders going across his land, and the
8 project operator is providing fencing to basically provide a
9 well-recognized trail around this particular farmer's field.

10 Time, obviously, doesn't allow me to go into any
11 more detail. What I want to end on is the recommendation
12 that instead of solely restricting ourselves in terms of
13 recreation opportunities to the designated areas, what we
14 have to do in Alberta, and this is obviously particularly
15 true adjacent to our major urban centres, is to think of
16 recreation opportunities in the total concept using the
17 amenity value of the countryside and recognizing that as a
18 resource for recreation. I think if we do that, then we can
19 answer some of the problems that obviously are going to and
20 have arisen in regards to future pressures of recreation on
21 our rural environment. Thank you.

22 (APPLAUSE)

23 MR. P. SEYMOUR: Any questions?

24 MR. R. WHISTANCE-SMITH: Ron Whistance-Smith; I am just
25 wondering if you would like to say something about how the
26 Bruce Trail, the Wakegan Trail and their use of private land
27 in this case, can this be somehow formalized through a



1 program like you're talking about where the landowners would
2 receive some kind of compensation, or just how would that
3 work?

4 DR. G. SWINNERTON: I think it has to become more
5 formalized, Ron. At the moment, as far as I know with the
6 Wakegan Trail, it is just a gentlemen's agreement. I think
7 when you get the situation of large numbers using those
8 trails, then we have to go to something of a more formalized
9 nature. What is interesting with regards to trails is that
10 a colleague of mine at the University of Waterloo has had
11 two graduate students doing research on this, at the
12 moment, one who has looked specifically at trails and
13 compared them in Ontario with the British situation, another
14 graduate student who is just completing a thesis on looking
15 at the Bruce Trail in connection with the Appalachian
16 Trail in the United States. I think that we really have to
17 look towards more formalized agreements if these types of
18 trails are going to be implemented. It is simply a matter
19 of numbers, and it's a matter of safety. The situation that
20 arises, of course, is what sort of compensation do you
21 provide, and what safeguards. It is a management problem.
22 I think there is no problem in many instances when you have
23 formalized groups using agricultural land, be it in the
24 public sector or in the private sector, in the sense that
25 they have rules of behaviour. So if you talk to Alberta
26 Snowmobilers Association, or the Four-Wheel Drive
27 Association, you get extremely conscientious attitude in



1 terms of the environment. The problem is that the vast
2 majority of the people don't belong to such organizations.
3 MR. G. PASCHEN: Gerry Paschen, Non-Renewable
4 Resources Study Group. There is the Canadian Youth Hostel
5 Association, I would like to point out, that even though a
6 lot of things happening in England, there has been a start
7 made in Canada in 1936. In the Province of Alberta, there
8 is approximately 30 youth hostels; that includes hostels
9 between Jasper and Banff, there is a total of 11. There is
10 a lot of hiking trails out there and I think you are quite
11 aware of it. Also, there is trails north, there is the
12 Athabaska Trail which has had its hundredth anniversary
13 celebration. Chuckwagon and horseback riders on an annual
14 trip make the trip down the Athabaska Trail. Portions of
15 the Athabaska Trail past the halfway the point is used
16 today for bicycle riders, and then of course in the City of
17 Edmonton we have a very fine horse trail between Whitemud
18 and, I guess, Hawryluk Park. We started this a number of
19 years ago, and I'm very proud to be a Canadian for those
20 reasons.

21 DR. G. SWINNERTON: Don't get me wrong, I am not
22 unaware of these things, but I think as you say most of
23 those trails on public land be they within the national
24 parks, although I certainly appreciate your comments about
25 the trail in the north, there is the Chinook Trail in
26 Calgary as well, but I think relative to what we might have
27 to look toward in the future, is that we are in the very



1 incipient stages of any development along those lines.

2 MR. C. FINLAY : Cam Finlay , and one of the problems
3 we have, I think, is taxation. We have private land and we
4 were thinking of making it into a recreation and allowing
5 the public on it. I had to back off because the local
6 municipality taxed me as recreation land, so I ran a few
7 cows on it for a few days and now I'm on agricultural land.
8 So those are the things that are very, very critical, and
9 my taxes would have been ten times more if I kept the
10 recreation on it.

11 DR. G. SWINNERTON: I appreciate that, Cam, and that is
12 why I say that at the moment there is little incentive for
13 the private landowner to basically go out of his way to
14 make provisions for recreation.

15 MR. T. COTTRELL: Tom Cottrell; you mentioned, in
16 fact you listed a number of factors of demand. One thing I
17 would like to ask is, have you noticed any temporal change in
18 use? I think, for example, Algonquin Park in Ontario is the
19 only way you can get away from people in Algonquin Park now
20 is to go out in the wintertime rather than in the summertime.
21 Have you noticed any patterns like that one?

22 DR. G. SWINNERTON: It is interesting you should mention
23 that. One of the distinctive features probably of Canadian
24 recreation patterns relative to anywhere else in the world
25 is the fact that our participation levels for winter
26 recreation activities compared with the summer ones are
27 almost as high. If we take, say, swimming which stands out



1 extremely well in the summer, obviously, I guess we do have
2 some hardy souls, but by and large if we look at
3 participation levels in winter activities and summer
4 activities, the proportion that participate are pretty
5 comparable. I think it is noticeable in this regard then
6 Ontario has recently had two studies on the winter use of
7 parks, and certainly this year Alberta Recreation and Parks,
8 the parks program has recently brought out a brochure
9 indicating the recreational opportunities of their
10 provincial parks; the recreation division have brought out
11 a number of brochures of an advisory nature in terms of the
12 use of outdoor areas in the winter. How to be appropriately
13 dressed, safeguards and things of this nature.

14 So that levels of use and peaking of use is an
15 important thing. It is obviously to a large extent
16 determined by the weather. It is also determined by our
17 periods of non-obligated time. I think what is happening,
18 and this is partly a function of planning, is that many of
19 these recreation areas, be they Parks Canada or in the
20 private sector, are obviously trying to extend their periods
21 of use. You know, if you set up a structure, be it Odyssey
22 or anything else, you have got operating costs throughout
23 the year, and the tendency is obviously to try and extend
24 that operation period as much as possible.

25 MR. P. SEYMOUR: Any other questions?

26 MR. T. COTTRELL: I have another question. You
27 mentioned that primary activity areas are generally



1 activities that are not physically demanding, is that
2 correct?

3 DR. G. SWINNERTON: What I am saying is that if we look
4 at the proportion of people who are participating in
5 recreational activities in terms of how they use leisure
6 time, the types of activities that stand way out are the ones
7 like watching T.V., social visiting and things of this nature.

8 MR. T. COTTRELL: Has the Participaction program had
9 any effect on that pattern?

10 DR. G. SWINNERTON: It probably has to a limited extent.
11 We get into the sort of motivational aspects of whether it
12 is intrinsic motivation or trinsic motivation; you know,
13 whether you are doing it because the motivation is internal
14 to you, or whether it's external. What is the problem is
15 not so much that people don't participate, it is whether
16 they carry on participating. I think one of the problems
17 that I certainly always stress to my students, being at the
18 U of A with a fairly large physical education department,
19 is that we can quite often be misled by the fact that we see
20 hundreds of people jogging every lunchtime, winter, summer and
21 all seasons of the year, and yet the vast majority of the
22 population is pretty sedentary in terms of recreation.

23 MR. P. SEYMOUR: If there are no further questions,
24 it remains for me to thank Guy for a very thoughtful,
25 thought-provoking presentation. Thank you.

26 DR. G. SWINNERTON: Thank you.

27 (FILM BEING SHOWN)

(MEETING ADJOURNED UNTIL SATURDAY, DECEMBER 5TH, 1981)



1 PROCEEDINGS TAKEN ON DECEMBER 5, A.D. 1981

2 CHAIRMAN - DR. MARTHA KOSTUCH

3 -----

4 DR. M. KOSTUCH: Are we ready to start with the
5 Chairmen's reports this morning? We will first have the
6 Membership Committee Report from Bill Flook. Bill?

7 MEMBERSHIP COMMITTEE REPORT GIVEN BY CHAIRMAN BILL FLOOK

8 DR. M. KOSTUCH: Would someone like to move the
9 adoption of Bill's report? Moved by Ian Shaw and seconded
10 by Ron Whistance-Smith.

11 Is there any discussion, comments or questions?
12 All those in favour of the Membership report?

13 (SHOW OF HANDS)

14 Opposed?

15 (MOTION CARRIED)

16 I wonder if I could just make a request to the
17 chairmen that they highlight their reports; it would be
18 certainly nice. If you have to read it, that is fine, but
19 we would certainly appreciate it if you could highlight it.

20 I will call on Graham Griffiths to give the
21 Environment Protection Study Group Report.

22 ENVIRONMENT PROTECTION STUDY GROUP REPORT GIVEN BY CHAIRMAN

23 G. GRIFFITHS

24 DR. G. GRIFFITHS: I move that the report presented be
25 adopted. Is that in order for me to move it? Thank you.

26 DR. M. KOSTUCH: Is there a second to the motion?
27 Guy Swinnerton. Is there any discussion? If not, I will



1 call the question. All those in favour?

2 (SHOW OF HANDS)

3 Opposed?

4 (MOTION CARRIED)

5 I guess I read my agenda wrong. I was supposed to
6 be doing the main PAC report now and the SAC and EEAC, but I
7 thought we would do the study group reports now and continue
8 with them later. If there is no objections, we will
9 continue with that and then have the SAC and EEAC after
10 dinner.

11 The Non-Renewable Resource Study Group Report;
12 Chris Dunkley?

13 MRS. B. HUNTER: That will have to be postponed, too,
14 Martha; he thought it would be later.

15 DR. M. KOSTUCH: Then we will have Lub Wojtiw give
16 the Pollution Study Group Report.

17 POLLUTION STUDY GROUP REPORT GIVEN BY CHAIRMAN LUB WOJTIW

18 MR. L. WOJTIW: I would like to move this report as
19 read.

20 DR. M. KOSTUCH: Is there a second to the motion?

21 MR. BILL IRWIN: Seconded.

22 DR. M. KOSTUCH: Is there any discussion or questions?
23 If not, I will call the question. All those in favour of
24 the motion?

25 (SHOW OF HANDS)

26 Opposed?

27 (MOTION CARRIED)



1 The Renewable Resource Study Group; Andy?

2 RENEWABLE RESOURCES STUDY GROUP REPORT GIVEN BY CHAIRMAN

3 ANDY WIRENGA

4 MR. A. WIRENGA: I would like to move the report
5 be accepted as read.

6 DR. M. KOSTUCH: Is there a second to the motion?
7 Seconded by Ron Whistance-Smith. Any discussion or questions?
8 All those in favour of the motion?

9 (SHOW OF HANDS)

10 Opposed?

11 (MOTION CARRIED)

12 The Urban Environment Study Group Report; Steve?
13 Steve is not present. Chris is not present yet? Bill or
14 Terry, are you ready to give your report? We will have the
15 report of the Environment Education Advisory Committee.

16 ENVIRONMENT EDUCATION ADVISORY COMMITTEE REPORT GIVEN BY

17 CHAIRMAN BILL BATYCKY

18 MR. BILL BATYCKY: I would like to move that this
19 report be adopted as distributed.

20 DR. M. KOSTUCH: Thank you, Bill. Is there a second
21 for that motion? Seconded by Bob Richardson. Any
22 discussion? If not, I will call the question. All those in
23 favour?

24 (SHOW OF HANDS)

25 Opposed?

26 (MOTION CARRIED)

27 Terry Veeman will give the report of the Science



1 Advisory Committee now.

2 SCIENCE ADVISORY COMMITTEE REPORT GIVEN BY CHAIRMAN DR. T.
3 VEEMAN

4 DR. T. VEEMAN: I move that the report be accepted.

5 DR. M. KOSTUCH: Is there a second to the motion?

6 Seconded by Peter Dranchuk. Any questions or discussion?

7 If not, all those in favour?

8 (SHOW OF HANDS)

9 Opposed?

10 (MOTION CARRIED)

11 The Science Advisory Committee is made up of -- both
12 the Educational and Science Advisory Committees are made up of
13 professional people who give up their time for the
14 environment, and I think we as PAC members owe our
15 appreciation to them. We represent the public, and I think
16 we, too, are all volunteers who give up our time, but it is
17 nice to see the scientists giving up their time to the
18 environmental cause. I hope you have got his comments
19 regarding interbasin transfer in there. I want that on the
20 record.

21 Bob, we will turn the meeting over to you now.

22 MR. R. RICHARDSON: I hope you are in fine fettle this
23 morning; we have five resolutions to consider from
24 yesterday, three of which were tabled and two of which were
25 deferred. Graham, are you ready with yours?

26 DR. G. GRIFFITHS: Yes.

27 MR. R. RICHARDSON: First of all, before Graham presents



1 his revised resolution, we need a motion to untable that
2 resolution. Moved by Michael Muc and seconded by Betty
3 Hunter. All in favour?

4 (SHOW OF HANDS)

5 Opposed, if any?

6 (MOTION CARRIED)

7 Graham, will you go ahead with your revised
8 resolution, please?

9 DR. G. GRIFFITHS: Thank you, Mr. Chairman. I have a
10 revised version of the resolution which was produced after
11 consulting with Ken Blom and Mr. Muc. It is Resolution
12 Number 4 and the resolution is revised. Now, we have not
13 got the revised version printed, therefore, I would be
14 grateful if you would write it down; I will read it slowly.

15 The resolution now reads: Be it resolved that the
16 Alberta Government take legislative and administrative
17 measures to ensure that public notice concerning accidental
18 or unauthorized spills and releases of harmful substances is
19 given through the media, and that public access is provided
20 to all relevant information.

21 That is the end of the resolution as revised.

22 MR. C. WOOD: There was an article in last
23 night's Journal about that; did you see it?

24 DR. G. GRIFFITHS: I move that this resolution be
25 adopted as read.

26 MR. R. RICHARDSON: Do we have a seconder?

27 MR. K. BLOM: Ken Blom; seconded.



1 MR. R. RICHARDSON: Any discussion?

2 MR. M. MUC: I guess it was an oversight, but how
3 do you define "authorized spills and releases"? Is there
4 such a thing?

5 DR. G. GRIFFITHS: There are authorized releases.
6 Syncrude is authorized to release so many tons of sulphur a
7 day. An unauthorized release is what we are concerned about
8 here. Yes, I see the point, that the word "unauthorized"
9 really is superfluous when applied to spills, but it is not
10 superfluous when applied to releases.

11 MR. BILL FLOOK: All you need is the word "releases."
12 The word "spills" is superfluous.

13 DR. G. GRIFFITHS: The word "releases" is applied in
14 the legislation to gases, and the word "spills" is applied to
15 liquids. We are trying to encompass everything here.

16 MR. R. RICHARDSON: Is there any further discussion?

17 DR. M. KOSTUCH: Martha Kostuch; only that it is
18 pointed out to me that Energy and Natural Resources is often
19 involved with spills in the eastern slopes area, and they
20 are the first notified, and perhaps that could also be
21 directed to them.

22 MR. R. RICHARDSON: I think that was directed to them.

23 DR. G. GRIFFITHS: By the ERCB?

24 DR. M. KOSTUCH: No, the ERCB is separate, too.

25 MR. R. RICHARDSON: Yes, but it says Chairman Energy
26 Conservation Resources Board.

27 DR. M. KOSTUCH: That's Department of Energy and



1 Natural Resources.

2 MR. R. RICHARDSON: You want it to go to them as well?

3 DR. M. KOSTUCH: That's right, because the Energy
4 and Natural Resources is responsible for all public land in
5 the province.

6 MR. R. RICHARDSON: We have it directed to the Premier,
7 the Minister of the Environment, the Solicitor-General, the
8 Minister of Municipal Affairs, Minister of Health, Minister
9 of Energy and Natural Resources, and the Chairman of the
10 Energy Resources Conservation Board, with copies to all
11 MLA's.

12 MR. L. WOJTIW: Lub Wojtiw, Pollution Study Group.
13 I am still having problems with the terms "harmful
14 substances." What may be harmful to some people, may not be
15 defined as harmful to others. Is there anywhere that we can
16 get a clarification on that? After all, water can be
17 harmful to you if you take too much of it, you know.

18 MR. R. RICHARDSON: It's what you mix with it. Any
19 further comments? All in favour?

20 (SHOW OF HANDS)

21 Contrary?

22 (MOTION CARRIED)

23 Thank you, Graham.

24 DR. G. GRIFFITHS: It may require a little extra
25 background note, as we are sending it to other ministers.
26 It can be done later.

27 MR. R. RICHARDSON: Right. Chris, are you ready with



1 yours?

2 MR. C. DUNKLEY: Yes.

3 MR. R. RICHARDSON: This is Resolution Number 6, and
4 again, we will require a motion to untable this resolution,
5 and your name, please? Moved by Charlie Wood and seconded
6 by Ian Shaw. All in favour?

7 (SHOW OF HANDS)

8 Contrary, if any?

9 (MOTION CARRIED)

10 Will you go ahead with your proposed resolution?

11 MR. C. DUNKLEY: Do you wish that this be read
12 slowly so that people can write the changes down?

13 MR. R. RICHARDSON: Yes, I think so.

14 MR. C. DUNKLEY: Be it resolved that the Government
15 of Alberta enact legislation to restrict the use of Class 1,
16 2 and 3 land to uses which will not reduce its
17 agricultural capacity. Restrict Class 1, 2, 3 lands to uses
18 which will not reduce its agricultural capacity, and then
19 this restriction to be included in all regional plans and
20 municipal bylaws and rigidly adhered to unless permission for
21 an alternate use is granted by a designated provincial level
22 authority, so strike out the word "approved" and insert
23 "level," after holding public hearings.

24 Now I see Martha shaking her head, so it must mean
25 there is something wrong.

26 MR. R. RICHARDSON: Just a moment, we have to move the
27 motion first and second it. Are you moving the motion, Chris?



1 MR. C. DUNKLEY: I so move.
2 MR. R. RICHARDSON: Do we have a seconder?
3 MRS. B. HUNTER: I will second it.
4 MR. R. RICHARDSON: Okay. Discussion now, Martha.
5 DR. G. GRIFFITHS: Could it be reread, please?
6 DR. M. KOSTUCH: Wait until I make my comments, and
7 then we can reread it.

8 We had discussed it last night, and we had said
9 future agricultural capabilities in all uses which -- okay,
10 restrict the use of Class 1, 2 and 3 land to uses which will
11 not reduce the future agricultural capability, because we
12 had done this because we may use this land for something now
13 at this time for some other use such as wildlife habitat,
14 such as recreation, some other uses which will be very
15 legitimate uses at this time, but will not restrict its
16 future capability, and it will again be able to be used for
17 agriculture.

18 So I would move that Chris either change the
19 wording of the motion, or move an amendment.

20 MR. C. DUNKLEY: I just left out the word "future."
21 Is that right?

22 DR. M. KOSTUCH: Yes, and I think "capability" rather
23 than "capacity," but I guess it doesn't matter much.

24 MR. R. RICHARDSON: You will accept the insert of the
25 word "future"?

26 MR. C. DUNKLEY: Yes.

27 MR. R. RICHARDSON: How about you, Betty?



1 MRS. B. HUNTER: Yes.

2 MR. R. RICHARDSON: Okay, thank you, Martha. Next.

3 DR. M. KOSTUCH: I will certainly go along with this
4 resolution, but I still have some concerns, and these
5 concerns are more for the future of PAC to look at. I think
6 our theme here is what are the options for the future, and
7 what are the options for the future of urban growth. It is
8 fine to say that urban growth can not occur on Class 1, 2
9 and 3 agricultural land, but where do we want urban growth
10 to occur. There is going to be a doubling of population in
11 Alberta, is what we are told yesterday, by the year 2006. I
12 think PAC has an obligation to come up with some options and
13 some direction as to where that urban growth should be
14 occurring.

15 Some of our options would be force redevelopment
16 in existing cities to increase the densities of those
17 cities. We could have growth in northeastern Alberta, but
18 there, too, we have to look at the sensitive environment
19 that is there, the wildlife habitat that could be
20 destructed. We could have growth in the foothills - Nordegg
21 has recently been studied for a new town to take the urban
22 growth that would result from the Odyssey if we aren't able
23 to stop it, which heaven forbid, but if we can't, they will
24 need a new community. So Nordegg is being looked at. So
25 perhaps we want this growth to occur in the foothills.

26 I think we have to decide whether we want that
27 or not. Do we want growth in the fringe areas such as



1 Rocky Mountain House? In other fringe areas such as Drayton
2 Valley, Sundre? If so, what are the losses of agricultural
3 land due to transportation routes that are going to be made
4 to get the people from existing centres such as Edmonton and
5 Calgary to places like Rocky and Drayton and other fringe
6 areas?

7 Is the loss of agricultural land from those uses
8 going to be greater or more severe than the development
9 around the existing cities? I think PAC has an obligation,
10 that the theme of our conference is options for the future,
11 and we are just saying how it shouldn't be done. We are
12 saying it should not occur on agricultural Class 1, 2 and 3
13 land, but where do you want that growth to occur?

14 MR. R. RICHARDSON: Those are very good remarks, Martha,
15 and I think that this has to be a subject of a future
16 resolution, though.

17 DR. M. KOSTUCH: I don't expect you to look at it
18 today.

19 MR. R. RICHARDSON: I didn't think you would. At any
20 rate, I hope that the chairman of whatever study group is
21 handling land use and urban environment is going to take note
22 of Martha's remarks, because they are very well thought out,
23 and I think there is meat in there for several meetings to
24 consider just what we should do. I agree completely with
25 Martha that one of the things that PAC should not be is
26 completely negative. At any rate, that is off the subject.

27 Are there any more comments on this particular



1 resolution? Dr. Bentley?

2 DR. F. BENTLEY: Mr. Chairman, I agree with Martha
3 in that we mustn't lose credibility by suggesting that it is
4 possible to freeze forever all Class 1, 2 and 3 land, but I
5 think all of the points that she has raised are covered by
6 the concluding part of the resolution we have here which
7 provides for to be granted by designated provincial level
8 authority after holding appropriate public hearings. So I
9 think that her concerns are covered by that phrase.

10 MR. R. RICHARDSON: Yes, I think her concerns, but what
11 Martha was really getting at was the fact that PAC should be
12 providing some guidance to the government as to what areas
13 they should look into for further urban development. Is that
14 right, Martha?

15 DR. M. KOSTUCH: That's right. I'm not opposed to
16 addressing the issue; I just think we have to move in a
17 positive direction.

18 MR. R. RICHARDSON: Any other comments? Mike?

19 MR. M. MUC: I'm wondering if possibly we should
20 qualify the classes, because there were so many classes for
21 different purposes, by the agricultural land, or are you
22 feeling that that is implicit?

23 MR. C. DUNKLEY: I think it was enough, according to
24 the information that we have. Like, Ron Whistance-Smith
25 tells me that there is maps very, very precise detail of
26 land capability in their libraries right now.

27 MR. M. MUC: So is it understood that you say



1 Class 1, 2, 3 land, everybody knows that it's going to be
2 agricultural land you're talking about?

3 MR. C. DUNKLEY: If you tie this in with the
4 resolution that we voted on before, the whole intent is to
5 clarify what is meant to eliminate all this ambiguity that
6 exists in the legislation, and this implies three different
7 qualities of land; it is up to them to get it into place.
8 Whether they use CLI or whatever they use, I really don't
9 care, as long as they get uniformity and clarity into the
10 planning and legislation by law.

11 MR. M. MUC: One of my concerns, though, Chris,
12 is somebody might not understand when you say Class 1, 2, 3,
13 what particular application, because we can talk about
14 recreational land in different classes, we can talk about
15 forestry land in different classes, we can talk about
16 agricultural land, so that class, then, is within the
17 context of agricultural, not any other classification
18 system or I may be incorrect.

19 MR. R. RICHARDSON: Are you referring to the CLI
20 system?

21 MR. BILL FLOOK: You should insert that, the CLI
22 Class 1.

23 MR. C. DUNKLEY: CLI Class 1, 2, 3; that is your
24 suggestion.

25 MR. R. RICHARDSON: Dr. Bentley, do you have a comment
26 on this?

27 DR. F. BENTLEY: Yes, because the CLI applies not



1 only to agricultural capabilities but to recreation and
2 wildlife and so on. So I suggest that the word needs to be
3 inserted before class, "CLI agricultural capabilities,"
4 and then it is ironclad.

5 MR. R. RICHARDSON: Would you like to make a motion of
6 amendment to cover that?

7 DR. F. BENTLEY: I'm not authorized.

8 MR. M. MUC: I will make that motion, then.

9 MR. C. DUNKLEY: So insert "CLI Class 1, 2, 3," so
10 CLI has got to go just before the --

11 DR. M. KOSTUCH: No, "CLI agricultural capabilities,
12 Class 1, 2 and 3."

13 MR. R. RICHARDSON: We need a seconder for that
14 amendment. Do we have a seconder?

15 DR. GUY SWINNERTON: Second the motion.

16 MR. R. RICHARDSON: Any discussion on the amendment?

17 DR. G. GRIFFITHS: May I request rereading the
18 resolution as read, to make sure we have got it?

19 MR. R. RICHARDSON: Would you read the resolution as
20 amended?

21 MR. C. DUNKLEY: Be it resolved that the Government
22 of Alberta enact legislation to restrict the use of CLI
23 agricultural capability Class 1, 2 and 3 lands to uses which
24 will not reduce its future agricultural capabilities.
25 This restriction to be included in all regional plans and
26 municipal bylaws and rigidly adhered to unless permission
27 for an alternate use is granted by designated provincial



1 level authority after holding suitable public hearings.

2 MR. R. RICHARDSON: Any more comments on the
3 amendment?

4 MR. L. MCKIBBEN: My name is Lee McKibben, and I have
5 just been appointed to the Environmental Education Advisory
6 Committee, and I am speaking in support of the motion, but
7 I do have some concerns that follow upon the remarks that
8 Martha made here.

9 I wanted to point out that the role of the
10 regional planning process here in Alberta is still rather
11 unclear at this point in time, and is an evolving thing. I
12 think personally that it is rather questionable whether this
13 mechanism is anywhere near sufficient to have the regulatory
14 clout to do what I think you would like to do, and this
15 brings us back to Martha's suggestion that further work
16 needs to be done in the course of the upcoming year.

17 In addition, I think it is very likely, we
18 discussed this at some length last night in reviewing the
19 resolution, that the Alberta Planning Board would be the
20 designated authority that you mention in the second part of
21 the resolution there. I think it needs to be pointed out
22 that the Alberta Planning Board has had a very uneven
23 inconsistent track record in dealing with these kinds of
24 issues. It is perhaps understandable in that subdivision
25 regulations do not provide clear-cut criteria to give
26 guidance in making these types of decisions. I guess my
27 point really is that this is only a start, that we almost



1 undoubtedly need an additional mechanism to be looked at over
2 the course of another year. But given that we are working
3 with the regional planning system here and its impact on
4 municipal plans, I would like to propose one other small
5 amendment to the resolution.

6 MR. R. RICHARDSON: We have to deal with this amendment
7 first. Is there any other comments on this amendment? All
8 in favour?

9 (SHOW OF HANDS)

10 Contrary, if any?

11 (AMENDMENT CARRIED)

12 Okay, now, Lee.

13 MR. L. MCKIBBEN: Sorry. In that completed regional
14 plans are not required to be in place until the end of next
15 year, and also given that much of the policy which is in the
16 regional plans is advisory policy, it would seem to me that
17 it might be helpful if we included a phrase here to say this
18 restriction is to be included immediately as prescriptive
19 policy rather than advisory policy, so that the intent is
20 very clear. So to be included the insertion would be
21 "immediately as prescriptive policy in all regional plans."

22 MR. R. RICHARDSON: Do we have a seconder for that
23 amendment? Bill Batycky.

24 Would you read that amendment again; I didn't get
25 one word down.

26 MR. L. MCKIBBEN: To be included immediately as
27 prescriptive policy.



1 MR. R. RICHARDSON: Thank you, Lee. Any discussion on
2 the amendment? All in favour?

3 (SHOW OF HANDS)

4 Contrary, if any?

5 (AMENDMENT CARRIED)

6 Any more comments on the motion as a whole?

7 MR. C. WALKER: Chris Walker; I've just been
8 appointed to the Energy Conservation Study Group. I have
9 another concern which relates to tying this resolution into
10 the previous resolution relating to preserving prime
11 agricultural lands. It would seem to me that the intent of
12 Resolution 6 is to take the lands that are generally
13 considered to be the prime lands worthy of keeping in
14 agricultural use or whatever, in that kind of possibility
15 for the time being. However, the intent of Resolution 5 is
16 to establish definitions of prime, good and poor
17 agricultural land, and I believe are intended to do the same
18 thing as Resolution 6 but over the longer term. I just feel
19 that it is important that Resolution 6 be tied into
20 Resolution 5. So I would suggest an additional sentence to
21 be an amendment to Resolution 6 stating to the effect that
22 when the Alberta Government establishes definitions for
23 prime agricultural land, these designations would replace
24 the designation of CLI agricultural capability Class 1, 2
25 and 3.

26 MR. R. RICHARDSON: You wish to have that added at the
27 bottom of the resolution?



1 MR. C. WALKER: Yes, I believe it maintains the
2 intent, and it also ties into Resolution 5. I feel that both
3 of these resolutions are extremely important.

4 MR. R. RICHARDSON: Did you get that copied down? Would
5 you say it more slowly?

6 MR. C. WALKER: The wording may not be perfect, but
7 I'll give it another stab here. The designation -- I'll
8 start it out right from the beginning of the sentence. The
9 restriction to CLI agricultural capability Class 1, 2 and 3
10 to be replaced by the designation of prime agricultural land
11 when the Alberta Government has enacted legislation defining
12 prime agricultural land.

13 MR. C. DUNKLEY: I didn't get where that was going
14 to be inserted.

15 MR. C. WALKER: Right at the end; it would be an
16 additional sentence.

17 MR. R. RICHARDSON: Did you get that down, Chris?

18 MR. C. DUNKLEY: No, I didn't, but as long as
19 everybody else got it, I can catch up with it later.

20 MR. BILL FLOOK: Mr. Chairman, I feel I should make
21 a comment here in line with what you were just saying. I
22 believe the intent of Resolution 5 was that the definition
23 of prime, good and poor agricultural land should be made in
24 terms of the Canada Land Inventory agriculture capability
25 scale; it should be related to that, not defined by any new
26 system or by any new device, but strictly in terms of the
27 Canada Land Inventory agricultural capability classification.



1 If in fact that were inserted in Resolution 5, it would take
2 care of your concerns.

3 MR. C. WALKER: I personally have some problems
4 with that. I work for the Edmonton Regional Planning
5 Commission and we have a constant problem with the use of
6 CLI 1, 2 and 3 in defining what is good land. It is very
7 easy for somebody to bring in information that shows that a
8 CLI designation of a particular class of land is incorrect.
9 So what you have is a situation where at least as far as
10 Regional Planning in Edmonton, it is not considered to be
11 that definitive a system. There has been a lot of
12 additional work done by Energy and Natural Resources, and
13 other groups, to bring these classifications that were
14 developed on a Canada-wide system more into line with what
15 is happening in Alberta. I think what I can see from that
16 definition of prime land, it would use CLI, but CLI as
17 modified by additional work done in Alberta to bring it into
18 actual conformity with the situation in Alberta.

19 MR. R. RICHARDSON: Is there a seconder for that
20 motion?

21 DR. T. VEEMAN: I will second it.

22 MR. BILL FLOOK: I still think, Mr. Chairman, the
23 intent of these things was to reduce difficulty, reduce
24 indefiniteness in the definition of land classes, and I see
25 nothing but stormy roads ahead if as a result of this
26 suggestion we get involved in a completely new set of
27 classifications. We are trying to avoid the introduction of



1 terms like "prime," "good" and "poor" in place of Class 1, 2
2 and 3 CLI. If in order to remove this stumbling block that
3 has crept into this system, to introduce a completely new
4 system of classification, you will make the thing worse, you
5 are compounding the difficulty.

6 I think we should revert to the CLI classification
7 even though it may have certain deficiencies, purely and
8 simply in order to simplify the system and make it clear what
9 people mean when they say poor, good and prime land.

10 MR. C. WALKER: We have been talking a little bit at
11 cross purposes here. I believe that the intent is that
12 firstly we want to have the definitions of prime, good and
13 poor; that is the intent of Resolution 5. I'm not saying we
14 need a completely new system, but I would say that perhaps
15 my wording would lead to that feeling. The only problem is,
16 to describe what is required to be done in terms of a
17 resolution, would make a very lengthy resolution. Is there
18 anybody who can suggest a way of, well, perhaps I can think
19 of it; it makes for a long final sentence, but something to
20 the effect, well, it's almost as if Resolution 5 needs to be
21 changed, really, to say that -- yeah, Resolution 5 saying --

22 MR. R. RICHARDSON: That is already done; it has already
23 been passed.

24 MR. C. WALKER: That's right, we are in a bit of a
25 bind here.

26 MR. R. RICHARDSON: Are there any further comments on
27 this amendment?



- 1 DR. M. KOSTUCH: Yes, we did have one other wording
2 last night. We had one other wording last night, and we had
3 the use of Class 1, 2 and 3 lands or prime lands in
4 quotations as identified by Resolution Number 5, and tie the
5 two resolutions together in that way, or prime land when
6 properly identified. And then that would tie the two things
7 together. We have asked for a definition of prime land in
8 Resolution Number 5; this would be asking for immediate use
9 of Class 1, 2 and 3 lands or prime lands when properly
10 identified. That is just an option.
- 11 MR. R. RICHARDSON: Perhaps we should vote on that first,
12 that amendment, and then if that is defeated, we can change
13 it as Martha says. Are you ready for the question on the
14 amendment or are there more comments? Would you reread the
15 resolution again?
- 16 MR. C. WALKER: Well, I was just ad-libbing; I
17 didn't really write it down; I was hoping somebody was
18 copying it.
- 19 MR. R. RICHARDSON: We were, but we got lost.
- 20 MR. C. WALKER: When the Alberta Government has
21 enacted legislation defining prime agricultural land, the
22 restriction to Class 1, 2, 3 to be replaced by the new
23 definition of prime land.
- 24 MR. R. RICHARDSON: All in favour?
- 25 (SHOW OF HANDS)
- 26 Contrary?
- 27 (SHOW OF HANDS)



1 (AMENDMENT DEFEATED)

2 Now, Martha, did you wish to propose a second
3 amendment?

4 DR. M. KOSTUCH: I will move the following amendment:
5 That the Government of Alberta enact legislation to restrict
6 the use of CLI agricultural capability Class 1, 2 and 3 land
7 or prime land when properly identified -- and so forth.

8 MR. R. RICHARDSON: Is there a seconder for that motion?

9 MR. C. DUNKLEY: Seconded.

10 MRS. B. MEIER: We had already amended it to say
11 the use of CLI agricultural capability Class 1, 2 and 3 land,
12 and now it will add prime lands when properly identified.

13 MR. BILL IRWIN: Mr. Chairman, I rise to speak in
14 opposition to the amendment, because I think it changes the
15 complete intent. It would allow the government to just
16 change and say we will only exclude Class 1 rather than Class
17 2 and 3, and I think it would really weaken the motion. The
18 concern, I think, is really regarding Class 1, 2 and 3 lands,
19 and if you allow them any place to wiggle out, they are going
20 to wiggle out if they want.

21 MR. BILL FLOOK: Very good point, Mr. Chairman. The
22 words "or prime lands" should be substituted including prime
23 land where properly identified.

24 DR. M. KOSTUCH: I will accept that.

25 DR. F. BENTLEY: Mr. Chairman, I wish to advise
26 against the use of the term "prime land," the reason being
27 that in some people's books it is Class 1 and 2, in some



1 other usages it is 1, 2 and 3, and in yet other usages it
2 is 1, 2, 3 and 4, and consequently, the resolution that we
3 passed yesterday, Number 5, has to get away from that. I
4 think we are unwise to use the term "prime land" in this
5 resolution at all, pending that other clarification.

6 MR. R. RICHARDSON: Any other comments on this
7 amendment?

8 MR. M. MUC: Is it possible to open up 5 by the
9 person who moved it?

10 DR. M. KOSTUCH: We need a motion to bring the
11 resolution back on the floor.

12 MR. M. MUC: It is critical enough, I think, and
13 we are getting nowhere. So would the mover of Number 5
14 initially, have to make that motion?

15 DR. M. KOSTUCH: We have no motion on the floor
16 right now; we would have to have a motion to defer this
17 motion.

18 MR. M. MUC: I will make that motion to defer
19 this motion.

20 MR. R. RICHARDSON: Is there a seconder to that? Bill
21 Batycky. All in favour?

22 (SHOW OF HANDS)

23 Contrary, if any?

24 (MOTION CARRIED)

25 If you wish to re-open Number 5, someone will have
26 to make a motion.

27 MR. M. MUC: I will make a motion to re-open



1 Number 5.

2 MR. R. RICHARDSON: Do we have a seconder? Bill Irwin.

3 All in favour?

4 (SHOW OF HANDS BY 10)

5 Contrary?

6 (SHOW OF HANDS BY 8)

7 (MOTION CARRIED)

8 Presumably someone wants to make an amendment to
9 Number 5.

10 MR. BILL FLOOK: Mr. Chairman, my suggestion was that
11 Number 5, the wording of Number 5, be that the Government of
12 Alberta establish specific and detailed definitions of prime,
13 good and poor agricultural land in terms of the CLI
14 agricultural capability scale for uniform uses in all
15 appropriate land use legislation in Alberta. Insert the
16 phrase, "in terms of the CLI agricultural capability scale".

17 MR. R. RICHARDSON: Will someone move that motion?

18 MR. M. MUC: I will move it.

19 MR. R. RICHARDSON: Do we have a seconder?

20 MRS. B. HUNTER: I will second it.

21 DR. T. VEEMAN: At the risk of disagreeing with Bill
22 again, let me reiterate my comments yesterday that prime
23 agricultural land should not be defined only in biophysical
24 characteristics. It must be related to economic/social uses
25 of land and to its location. It is easy to do it in terms
26 of these biophysical characteristics because we have that
27 system in place; it would be very easy to do that. But I



1 reiterate again that we would be led down the garden path
2 unless we consider some of these other aspects of land use
3 beyond its soil and climatic characteristics.

4 DR. G. SWINNERTON: To some extent, I concur with what
5 Terry has said. A number of years ago, back in the 1960's,
6 the State of California introduced legislation to protect its
7 agricultural land under the Land Conservation Act.
8 Initially the attempt was to define prime land on the basis
9 of the U.S. land capability system which had an eight grade
10 system. However, when they started applying it, they found
11 that it did not accurately take account of the prime
12 agricultural land, because there are certain crops which
13 have requirements which are quite contrary to the average
14 crop requirements which are basically taken care of under
15 the land use capability classification. In order to
16 provide a sufficiently vigorous safeguard, they had to bring
17 in a yield value per acre approach to take account of these
18 variations. The same thing applies to soils in Ontario or
19 certain crops there. Much the same problem arises, and I
20 alluded to it last night, with regards to the CLI land
21 capability for recreation. If we use a quantity measure
22 without taking into account certain aspects of accessibility,
23 certain unique characteristics, there is a problem of missing
24 out or losing out on some of these prime areas. I
25 appreciate that it complicates the problem; I think one has
26 to be aware of these factors.

27 MR. M. MUC: I think that I support in part what



1 these gentlemen are suggesting, but I do oppose it in the
2 larger degree because I think throughout that film we saw
3 yesterday, we saw personal interpretations of what is good
4 agricultural land and what is poor agricultural land. As
5 soon as you start opening it to a qualitative sort of
6 evaluation, then anybody can base it on a particular interest
7 point and say, I don't think this is prime in my
8 consideration based on my evaluation; it is poor land. We
9 have got a system, it is national, somebody must have come
10 up with it for a good reason, and it is useful; I think we
11 should stay with that kind of system without saying we need
12 our own system in Alberta. We are Canadians first, Albertans
13 second; why don't we follow the system that we follow in
14 Canada. It's as simple as that.

15 MR. I. TAYLOR: We are getting a little confused,
16 and I think the reason that we are getting a little confused
17 is that a lot of us perceive there is an emergency
18 situation which is going to exist over the next few years.
19 We also realize that the scale, whatever it was the CLI
20 mapped out, was done probably by some students in the
21 1970's; it may not, on a lot by lot, quarter section by
22 quarter section, be the definitive definition of what
23 constitutes various classes of agricultural land. So I
24 see there being two answers to this, and I see them as being
25 temporary delays. On the one hand, we want an immediate
26 freeze on the prime 1, 2 and 3 grade, the development of that
27 grade of land, for purposes which are not specifically



1 defined and which arguably can not take place on any other
2 class of soil. During that freeze, we need to be working on
3 the detailed definition on a very large-scale basis which
4 will define very, very clearly and for presumably a long
5 period of time, what is the precise quality of each of these
6 pieces of land. And this is obviously going to take some
7 time to define that, but in the time while you are doing it,
8 you don't want the horse to have bolted while you are fiddling
9 around on the locks on the stable door. So I think there is
10 two points to this; the one is the immediate freeze, the
11 second is the definition on a fine-scale basis of what you
12 are trying to do, and I would like to see if we can
13 incorporate those two concepts.

14 MR. T. COTTRELL: Tom Cottrell; I would like to add
15 a little comment that the City of Richmond in British
16 Columbia was given the agricultural capabilities of Class 1.
17 Anyone who has been there knows that it is not the slightest
18 bit suitable for agriculture because it is paved over and
19 built over.

20 MR. BILL FLOOK: Mr. Chairman, I would like just to
21 go back to the basic intent of Resolution 5, which was to
22 clarify an ambiguity, not to rectify the deficiencies in the
23 Canada Land Inventory classification. I don't think we are
24 in a position to do that, and I'm relieved to say, Terry,
25 that I don't see any disagreement between us. I think that
26 has to come later. All we want to do is remove an
27 ambiguity, and the Canada Land Inventory scale is a happy



1 device by which we can remove that ambiguity; let's use it
2 and turn our attention to improving its deficiencies or
3 removing its deficiencies later.

4 MR. R. RICHARDSON: Any further comments? I think we
5 had better cut it off now because we are getting rather long.
6 Are we ready to call the question on the amendment?

7 DR. M. KOSTUCH: Would you repeat the amendment?

8 MR. R. RICHARDSON: That the Alberta Government
9 establish specific detailed definitions for prime, good and
10 poor agricultural land in terms of CLI agricultural
11 capability scale for uniform usage in all appropriate land
12 use legislation in Alberta. All in favour?

13 (SHOW OF HANDS)

14 Contrary, if any?

15 (MOTION CARRIED)

16 Now can we call the question on the motion as a
17 whole? All in favour?

18 (SHOW OF HANDS)

19 Contrary?

20 (SHOW OF HANDS)

21 (MOTION CARRIED AS AMENDED)

22 It is now 10:15, Martha.

23 DR. M. KOSTUCH: Why don't we deal with the next
24 resolution.

25 MR. R. RICHARDSON: Number 6. We had deferred
26 Resolution Number 6 until we straightened that out. We have
27 now straightened out Resolution Number 5, hopefully, and I



1 am sorry if you think I cut off discussion, but there gets
2 to be a period when we have to do so.

3 Now I would like to go back to Resolution 6.

4 DR. M. KOSTUCH: Would you please read the amended
5 resolution.

6 MR. BILL FLOOK: I can read it for you, Mr. Chairman.

7 Be it resolved that the Government of Alberta enact
8 legislation to restrict the use of CLI agricultural
9 capability Class 1, 2 and 3 land to usage which will not
10 reduce their future capability. This restriction to be
11 included immediately as prescriptive policy in all regional
12 plans and municipal bylaws and rigidly adhered to unless
13 permission for alternative use is granted by designated
14 provincial authority after holding suitable public hearings.

15 MR. M. MUC: Was there a word missing?

16 MR. BILL FLOOK: There was one word missing; it
17 should be "future" agricultural capability.

18 MR. R. RICHARDSON: Are we ready for the question on
19 Number 6? All in favour?

20 (SHOW OF HANDS)

21 Contrary, if any?

22 (MOTION CARRIED)

23 MR. C. DUNKLEY: May I go on record as apologizing
24 to this whole group for the problems you have had with this
25 resolution. We had five meetings on it; there has been a
26 lot of time spent on this.

27 MR. M. MUC: I don't think an apology is



1 necessary, I think it just shows the democratic system we
2 have here and the way we all cooperate.

3 (APPLAUSE)

4 MR. R. RICHARDSON: It almost got to the point there
5 where I would have left out the "cooperation". But I do
6 appreciate the way in which you have made your comments,
7 because we want the resolutions as good and strong and as
8 perfect as possible before they go to the government,
9 because it is most important that we do not put any, or
10 leave them any loopholes, or any more than is necessary.

11 I guess we have three more still to consider, but
12 it is break time, so we will have to try and squeeze those
13 three in at sometime later on this afternoon, I guess.

14 MR. BILL BATYCKY: We have most of the study group
15 chairmen's reports already done which were to be done this
16 afternoon.

17 MR. R. RICHARDSON: Yes, we are hoping to get them in
18 this afternoon.

19 MR. BILL IRWIN: May I suggest that people are going
20 back and forth to have coffee, that we just forget about the
21 break and continue going?

22 MR. R. RICHARDSON: Is that all right with everyone?
23 All right, let's go ahead. Andy, could we have you come up,
24 please. Resolution 14, we first of all require an untabling
25 motion on 14. Moved by Ian Shaw and seconded by Bill
26 Batycky. All in favour?

27 (SHOW OF HANDS)



1 Contrary, if any?

2 (MOTION CARRIED)

3 Andy, would you read your revised Resolution Number
4 14?

5 MR. A. WIRENGA: We did some drastic surgery on
6 Resolution 14, and maybe I will read it slowly. I move that
7 the quality of the training program for the pesticide
8 applicator license be re-evaluated in terms of the level of
9 competence attained by the trainees.

10 MR. R. RICHARDSON: Do we have a seconder for that
11 motion? Would you state your name, please?

12 MR. L. HALFE: Louis Halfe; second.

13 MR. R. RICHARDSON: Any discussion?

14 MR. K. BLOM: Ken Blom, Alberta Public Health
15 Association. I believe there is a re-evaluation required in
16 total, and that that is an on-going thing, and will always,
17 I hope, be a part of a necessary item as we go along. I'm
18 not sure that you're adding anything to that resolution by
19 the last line in terms of whatever. My belief is that a
20 statement to the fact that the present program be re-evaluated
21 in the light of the needs of the day is sufficient, and I
22 would recommend that that not be qualified beyond that point.

23 MR. A. WIRENGA: If I may respond to that, some of
24 our people in our study group are concerned mainly with,
25 well, as the resolution says, with the competence of these
26 people, once they have completed the course, in terms of
27 testing the resulting product, if you will. In discussion



1 yesterday and last night, it became more clear to us that the
2 problem was not in -- or the major problem was not in the
3 material itself in most cases.

4 MR. K. BLOM: By way of reply, the whole question
5 in terms of these courses and their make-up falls into two
6 categories. One is in the fact of scientific background, the
7 other is in terms of the mechanics by which you enforce or
8 go about doing your work. I think that there has been a
9 tremendous and good effort made towards the quality of the
10 scientific background, although that needs upgrading as well.
11 But there has of late been an accent towards the mechanics
12 of how you apply, which also requires a re-evaluation in
13 total. I don't really believe -- yeah, I will just leave it
14 at that.

15 MR. R. RICHARDSON: Unless you wish to make an
16 amendment. Charlie.

17 MR. C. WOOD: Charlie Wood; I have to apologize
18 to Andy and the rest of the the committee because I didn't
19 attend the meetings when these things were done, and that is
20 when I should have done my nattering instead of now. As
21 this thing stands now, it doesn't appear to me that it goes
22 quite far enough. You're going to re-evaluate in terms of
23 the person's competence, but you don't say what you are
24 attempting to achieve. I would perhaps suggest an amendment
25 that we should follow with the phrase "so that each
26 individual can be sure of adequate training," and this
27 states your objectives. The way it is, as it stands now,



1 you don't have an objective.

2 MR. R. RICHARDSON: Are you making an amendment,
3 Charlie?

4 MR. C. WOOD: Yes.

5 MR. R. RICHARDSON: Would you read the whole amended
6 resolution, just so everybody knows?

7 MR. C. WOOD: The whole thing right from the
8 beginning?

9 That the quality of training -- I can't even read
10 my own shorthand. No, sorry, I can't read my own shorthand.

11 MR. A. WIRENGA: Is the first part the same?

12 MR. C. WOOD: Yes.

13 MR. A. WIRENGA: That the quality of the training
14 programs for the pesticide applicator license be
15 re-evaluated in terms of the level of competence attained by
16 the trainees so that --

17 MR. C. WOOD: Each individual can be assured of
18 adequate training.

19 MR. R. RICHARDSON: You want to add that?

20 MR. C. WOOD: Yes.

21 MR. R. RICHARDSON: Do we have a seconder for that
22 motion?

23 DR. G. GRIFFITHS: Second that motion.

24 MR. R. RICHARDSON: Any comments?

25 MR. A. WIRENGA: I believe that that would be a
26 valuable addition; I think it does make clear the intent of
27 this resolution.



1 MR. BILL BATYCKY: I just have one question. I agree
2 with what is said, but "be assured of adequate training," I
3 don't know if you had to interpret that, what you would
4 consider adequate training. I would look more for a measure
5 of outcome in maybe capability or something; I don't have
6 the right word and I don't know if training defines it
7 enough.

8 MR. C. WOOD: I agree, and if you can find a
9 better word, I will support it.

10 MR. R. RICHARDSON: Since we are only talking about the
11 semantics of one word, maybe Bill can think about it. If he
12 can come up with a better one, fine. If there is no other
13 comments, are you ready for the question? All in favour?

14 (SHOW OF HANDS)

15 Contrary, if any?

16 (MOTION CARRIED)

17 Now the next one is Number 15 and this one was not
18 tabled, this was merely deferred, so we don't need a motion;
19 we can just ask Andy to continue and read his revised Number
20 15.

21 MR. A. WIRENGA: Resolution 15. I move, and this
22 resolution, too, has also some length to it. Be it resolved
23 that the present regulations under the Agricultural Chemicals
24 Act -- the first part remains the same; there is just an
25 insertion -- that the present regulations under the
26 Agricultural Chemicals Act be revised so that all employees
27 working with pesticides have a mandatory medical



1 examination prior to -- and then after the "to" we want to
2 insert the words "and after," -- each spring season. Then
3 here there is quite an addition; the sentence continues - in
4 order to determine any relevant physical vulnerabilities that
5 an employee might have prior to starting work and
6 subsequently identifying any pathological conditions that
7 might have been caused due to exposure to the chemicals used.

8 MR. R. RICHARDSON: Do we have a seconder for that
9 amended motion? Would you stand and give yourname, please?

10 MS. L. HORSTMAN: Louise Horstman.

11 MR. R. RICHARDSON: Any comments?

12 DR. G. GRIFFITHS: A couple of points. I don't know if
13 these can be taken as editorial. First, you say "physical
14 vulnerabilities". I think you mean physiological
15 vulnerabilities in terms of allergies and so on. Physicals
16 suggest a physical defect.

17 DR. M. KOSTUCH: The terminology was selected by an
18 M.D. I don't think we have to question whether it is
19 physical or physiology.

20 DR. G. GRIFFITHS: Well that's fine; the normal usage
21 of etymologists would be to use physiological in that context.
22 The other point was the grammatical structure is not quite
23 consistent in the sentence. You said "in order to determine,"
24 and then use a participle later on; I think to be
25 consistent you should say "and to subsequently identify,"
26 and not run on with the participle, to make the sentence
27 consistent.



1 MR. R. RICHARDSON: That is a point well taken.

2 Any other comments?

3 MR. R. SHAW: I am in favour of the motion but
4 because of discussions we have had this morning and because
5 I work in the toxicological area, there is a very, very great
6 weakness in the motion. It is all well and good to make
7 reference to the fact that you're using organo phosphate
8 insecticides, for example, that you can go and get your blood
9 cholinesterase and you can have a measure of exposure, but
10 the difficulty comes up when you look at other pesticides.
11 You are now into an area where there is no agreement in
12 medical areas of people who work on these things as to how
13 much of a so-and-so insecticide causes such-and-such to an
14 individual. That, I think, is where the weakness lies. We
15 are asking that they would do this may be all well and good,
16 but we're asking them to do something that takes years to
17 establish. I just throw this out; I'm in favour of the
18 motion, but I do see a great weakness on this pie in the sky
19 part that I have raised.

20 MR. L. MCKIBBEN: Mr. Chairman, I agree with his
21 point from a scientific standpoint, but I think the purpose
22 of the motion here is simply to establish an intent, and
23 really we've recognized that we probably can't identify
24 longterm effects on an individual's health due to his
25 exposure to these chemicals. I think the idea is that
26 someone should at least check to see if they have got any
27 obvious problems that have emerged so that those can be taken



1 care of as a precaution and safety to the individual. I
2 don't think there was any intent to get into the longer term
3 sort of thing.

4 MR. M. MUC: I'm not a medical expert by any
5 means, but we should have included a mandatory appropriate
6 medical examination, and what I am suggesting by the word
7 "appropriate," is certain pesticides probably you would have
8 certain associated problems of a medical nature, and
9 therefore, if you know what you're looking for, then you can
10 sort of concentrate on that instead of running kind of a
11 blanket physical or physiological examination. I don't know;
12 maybe somebody with a medical background could speak as to
13 whether the word "appropriate" could add any strength and
14 contribute towards what really was suggested as being areas
15 that are of concern.

16 MR. R. RICHARDSON: Any other comments? Ready for the
17 question? All in favour?

18 (SHOW OF HANDS)

19 Contrary?

20 (SHOW OF HANDS)

21 (MOTION CARRIED)

22 MR. R. RICHARDSON: We have one more, but it is now
23 10:33 and we are running into somebody's time here.

24 DR. M. KOSTUCH: Mr. Chairman, the speaker will not
25 be using a full hour-and-a-half, and it would be the wish
26 of this group to complete the resolutions.

27 MR. R. RICHARDSON: Fine, let's get Number 16 out of



1 the way. Again, it was deferred, so that we can go right
2 into the amendment to it.

3 MR. A. WIRENGA: Thank you. There has been only one
4 small change in this resolution. I move be it resolved that
5 suitable medical system be set up by the Alberta Government
6 to ensure that all citizens in contact with -- instead of
7 "using" -- pesticides have simliar access to the medical
8 testing services now provided to licensed pesticide
9 applicators.

10 MR. R. RICHARDSON: Do we have a seconder for the
11 motion?

12 MR. G. PASCHEN: Seconded.

13 MR. R. RICHARDSON: Comments? Mike?

14 MR. M. MUC: I feel that "in contact with,"
15 somebody who is using a can of Raid with one shot is in
16 contact with pesticides, therefore I could run to the
17 medical people and say, listen, I need an evaluation, and
18 I could be doing that every second day. I tend to feel that
19 the intent is really on a large and sustained scale,
20 somebody who is working with it for half-a-day, for a day,
21 where there is a potential medical problem. But otherwise,
22 we are opening up this to abuse.

23 MR. R. RICHARDSON: Would you like to make an amendment?

24 MR. M. MUC: I certainly would. In contact
25 with pesticides on a large and sustained scale.

26 MR. R. RICHARDSON: Could we have a seconder for that?

27 MR. J. SHEMANCHUK: I don't think we can get this



1 resolution into any shape that will gain us any credibility
2 for the simple reason that the contact with sustained or
3 prolonged is all a matter of definition, and we really have
4 no definition, and we have no definition and we have no data
5 to support or to put through in a resolution. I would like
6 to make a recommendation that this resolution be withdrawn
7 and be brought back in the next year or so when more study
8 has been made. If we send this down to the Department of
9 the Environment, they will just look at us and say, what a
10 bunch of idiots.

11 MR. R. RICHARDSON: You're making a motion to table
12 this?

13 MR. J. SHEMANCHUK: Until next year.

14 MR. R. RICHARDSON: Do we have a seconder?

15 MR. I. SHAW: Seconded.

16 MR. R. RICHARDSON: All in favour?

17 (SHOW OF HANDS)

18 Contrary?

19 (SHOW OF HANDS)

20 (MOTION CARRIED, THE MOTION IS TABLED)

21 I am sorry that we have run over into somebody
22 else's time; I apologize.

23 DR. M. KOSTUCH: I will ask you to run over just a
24 second longer. George Stewart made a very good point
25 yesterday regarding Resolution Number 11, and adding to the
26 background. I would ask your indulgence for just a minute
27 just to add some examples of where the recommendations of the



1 Environment Conservation authority have not been taking
2 place, because if it goes forward as it is now, they will
3 just say, we have done this already, they will just point to
4 one or two things, and it would be just an add-on to the
5 background with some examples as to where the recommendations
6 have not been carried out and would give more credibility to
7 the resolution. I would just ask if there is any objections
8 to adding those examples to the background?

9 MR. R. RICHARDSON: No, there wouldn't be any
10 objections to adding them to the background. Are you doing
11 this, Martha, or who is doing it?

12 DR. M. KOSTUCH: I will be doing that, together with
13 the Environment Council of Alberta. If there are no
14 objections from any of the PAC members?

15 MR. R. RICHARDSON: Are there any objections from the
16 floor? Okay.

17 DR. M. KOSTUCH: Thank you.

18 MR. R. RICHARDSON: Thank you, Martha. I will now turn
19 the meeting over to the next chairman.

20 MR. T. SHEWCHUK: Ladies and gentlemen, it is my
21 pleasure to be the chairman for this section. I would like
22 to introduce our morning speaker to you. Mr. Paul Jackson
23 is the exploration manager for Canadian Hunter Explorations,
24 Calgary. He was raised in Alberta and received his
25 Bachelor of Science degree in geology from the University
26 of Calgary in 1968, which was a very good year.

27 He has 13 years of oil industry experience,



1 including 8 years with one of the major oil companies,
2 Amoco Canada. With Amoco, he spent several years on
3 assignment in the United States, as well as doing
4 exploration throughout Alberta and British Columbia.

5 The last five years with Canadian Hunter has
6 involved him in the early development of the Elmworth-Grande
7 Prairie area and exploration throughout Alberta. His talk
8 this morning will be on the need for more gas exploration.
9 Mr. Jackson.

10 MR. P. JACKSON: Thank you very much, Terry. I
11 would like to amend that title actually to the need for more
12 gas exploration and production, and you will see the
13 significance of that as I go along. Judging by the previous
14 discussions, I think I will leave questions till after the
15 talk. My time is cut down now, but I don't have more than,
16 say, 45 minutes of talking anyhow. So we will discuss things
17 afterwards.

18 As you probably all know, the gas exploration
19 business is virtually on a hold status now in the province,
20 actually in western Canada. The reasons for this, of
21 course, are the recent government changes through the NEP,
22 the National Energy Program, the Alberta-Ottawa Energy
23 Agreement of September, and rulings of the National Energy
24 Board. What they are basically saying to the gas industry
25 is this, that there is a sizeable gas surplus in the
26 country, and that it is enough to satisfy Canadian needs,
27 but we will have to curtail export sometime in the near



1 future. But what we really want is more oil exploration,
2 and particularly, up in the frontier regions.

3 Well, to start with, we certainly agree with going
4 out and finding more oil, and we certainly believe, as you
5 will see, that there is a tremendous gas surplus. In fact,
6 the NEP, in our estimation, undershoots that surplus by quite
7 a significant amount.

8 As I go on today, I am going to bring out many
9 reasons to continue maintaining a surplus at a certain level,
10 and continuing exploration in the conventional areas and the
11 frontier areas.

12 The talk today will be basically broken into two
13 parts; I think the first part should deal with the economics
14 of gas, supply and demand, and the need and reasons to
15 continue building a gas surplus supply. The second part, I
16 will go into this area, which is really the development of
17 the deep basin, and Canadian Hunter has been very actively
18 involved up here, so I think we have a pretty good data base
19 to work from to make future predictions and projections.
20 So I will talk about exploration and development plants, the
21 whole thing, so Martha can have her turn at questions, and
22 we'll get to that in the second part of the talk.

23 Okay, let's just go on to the economics of gas
24 exploration, and every company -- exploration company in the
25 country right now has to really come to grips with the very
26 poor economics for natural gas, and the really critical lack
27 of markets. They have to understand these things so that



1 they can plan, and many have planned to leave the country,
2 as you can see. They have reduced their programs. Really,
3 to be able to make judgments, you have to understand the gas
4 and supply situation. So if I can have the first slide, I
5 will get on into that for you.

6 What is the supply and demand situation? I have
7 tried to summarize it in one graph for you. It contains a
8 lot, but I will go through it. This graph is scaled in
9 trillions of cubic feet per year; that is the vertical scale
10 on the right. It goes from 1965 to 1980; that is historical
11 data; and then from 1980 to the year 2000 as a prediction of
12 what we will see in supply and demand.

13 The data on the left is largely from the CPA, that
14 is the Canadian Petroleum Association.

15 Just starting at the upper left is an orange curve
16 climbing to the right in 1980. That is the annual addition
17 to supply or to reserve curve. That is how much gas is
18 discovered and added to fields each year, and you can see it
19 has consistently risen from 1965 to 1980, and it now is in
20 the order of 5 TCF a year, 5 trillion cubic feet a year.

21 Then drop down to the next curve below that, and
22 that is the annual production. You see that that has also
23 risen. That has gone from about a TCF in 1965 up to about
24 2.4 TCF in 1980. If we break that apart, break that
25 production apart, you can see where it goes. The pink
26 section is export market, so about .8 TCF in 1980, and the
27 red part is Canadian requirement, Canadian supply.



1 Well, one of the observations I will make here is
2 that the gap between supply and reserves found, that is
3 between the orange curve and the next curve below, has always
4 been maintained by the industry at about 2½ to 3 TCF a year.
5 So this is the amount of gas above the production, the
6 production rate. So this gas goes into the surplus; this
7 fills this gas bubble you hear about that year by year that
8 amount of gas is being added to a surplus.

9 The surplus now in 1980 reached about 87 TCF; that
10 was according to the CPA. The NEB, which is the National
11 Energy Board, gave it 67 TCF. So here is the numbers game
12 again; you start seeing gaps and discrepancies, but either
13 way, they both agree there is a fairly large surplus, and
14 that just gets me out of defending each number.

15 The right-hand side of the graph really is a
16 projection to the year 2000 based on NEB data, National
17 Energy Board data, and they put out a very important report
18 in 1981 which is the supply and demand report for energy in
19 total in Canada, and they provided these numbers.

20 The top curve, the reserve addition curve, is
21 shown to peak over in 1985, and it goes on down to the year
22 2000. So they are predicting that the industry will not be
23 able to find the same amount of gas per year in the future.
24 I really should qualify this graph; the whole graph really
25 only talks about the western Canadian sedimentary basin,
26 largely; it doesn't include frontier areas in that reserves
27 aren't expected to come into the picture until very close to



1 the year 2000, the frontier gas.

2 But anyway, they decline, the finding rate very
3 significantly declines past 1985. So they are indicating a
4 crisis there in the finding rate.

5 This is one point of disagreement with the
6 industry because it states in 15 years we have been keeping
7 that curve climbing. There is no reason, with continued
8 activity, not to at least maintain a flat or continue to
9 climb, so we have a basic disagreement with the amount of
10 remaining gas reserves to be found in the country with the
11 NEB, with the government.

12 The next curve down is the dotted curve of supply
13 capability. That is really what the NEB calls the
14 deliverability test. They say, okay, we have found so much
15 reserve, but in any given year you can only deliver so much.
16 You only have a limited deliverability capability or supply
17 capability, and that is something just in excess of the
18 actual supply. This is if you turn the taps wide open. So
19 they are saying that is all the industry can provide. And
20 you can see that that also declines from about 1983,
21 actually, and you can see in 1995, if you follow that dotted
22 curve down, you can see it intersects Canadian requirements.
23 So they are saying that is the crisis, that Canadian supply
24 will not meet Canadian demand. Of course, in their
25 estimation, it completely eliminates the possibility of
26 exporting gas, so that is the reason that the exports are
27 shown to tail off about 1990.



1 This will allow me to bring up some of the major
2 disagreements with the NEB policy, with the government
3 policy, regarding gas. The first, as I mentioned, we
4 believe we can support the finite rate and keep the orange
5 curve up; we also know that with the right pricing and
6 economics and markets, it is critical we have markets, that
7 the supply curve can be raised very significantly, and the
8 basis of that is right in the province today there are about
9 10,000 gas wells, small gas fields, which are not hooked in
10 because the economics are not there, the markets are not
11 there. So on the short-term and the long-term, that curve
12 can be raised dramatically by having the proper incentives.

13 So what we call this is the NEB self-fulfilling
14 prophecy, that they are predicting a crisis, and sure enough
15 we will have one. Really, if you think about it, my title
16 is not as important as the supply. I am saying the need for
17 exploration, though the need really on the short-term is for
18 supply. Even the NEB projects a sizeable surplus. But it
19 is true, the country will be facing a supply crisis fairly
20 early unless the markets are there and the economics are
21 there. So we agree and disagree with the NEB on many points.

22 Let's just go on a little bit and talk about
23 exports. The exports in 1980 were about .8 TCF, and it is
24 shown to peak out in 1985, and then to decline very
25 dramatically. There are no further gas export licenses
26 being allowed.

27 As I will get onto a little later, we feel that



1 this is one of the major markets that we have access, that
2 we will be able to find the amount of gas to fill it, and
3 it is going to be one of the key points of my talk that
4 exports really are required to keep the industry active.
5 Then, the question you have right away is why go out and
6 find more just to sell it, just to market it, and then wind
7 up with a supply crisis or reserve shortage down the road.
8 Hopefully, I will answer those questions just in a minute
9 here.

10 I would just like to drop down a bit to that dark
11 red area which is Canadian gas requirements. Now, if there
12 is any part of that supply/demand report that is probably
13 pretty accurate, they have done a very good job, it is
14 predicting the usage of gas out to the year 2000. What they
15 have done there is looked at all additional uses such as
16 selling gas to eastern Canada, expanding industrial use,
17 petrochemical use, everything they can get their hands on,
18 and it is like every other NEB number, it is probably
19 conservative, there probably still is some maximizing to be
20 done in that area. That is another point of the gas
21 industry is that every effort should be made to use gas
22 wherever possible to replace imported crude oil and to use
23 it as a fuel because of its clean-burning capabilities.

24 There is one use that I would like to review with
25 you, and it is kind of a novel one, but it is one that has
26 tremendous potential. Right now in Italy there are 300,000
27 cars running on compressed natural gas, CNG, and in Canada



1 this movement is really just taking off. The University of
2 British Columbia has a research program regarding CNG, and
3 there is one company in Calgary, CNG Fuels, which is
4 actually marketing conversions and they are building service
5 stations. So there really is a tremendous potential here
6 for clean fuel or a fuel which is probably relatively cheap
7 compared to gasoline.

8 But here I go again hammering about reserves; as
9 long as the reserves are there, as long as we have a good
10 surplus, the price for CNG can be kept down to where it is
11 a bargain so it can be used for all these different uses.

12 Just going on to the next slide here, we get into
13 economics here a bit right now. This is a slide of the
14 annual Canadian deficit, and you can see it is quite
15 dramatic. From 1975 on, it is going down very, very
16 drastically, about \$11 billion a year this year, or in 1980.
17 We feel that natural gas has a major role to play in
18 handling this deficit problem, in turning the curve around,
19 or reducing its further plunge. In 1980, there were \$4
20 billion worth of exports, natural gas exports. So without
21 that, this curve would have been down to \$15 billion. This
22 is annual, so this is a tremendous deficit the country is
23 facing, and we are saying that there is, with the proper
24 economics and a usable surplus to export, to turn this
25 around. Now these numbers come right from Stats Canada, so
26 hopefully they are accurate. I'm not going to vouch for
27 that, but --



1 There is another way that gas can help, that
2 natural gas can help, and that is that it can be used in
3 place of crude oil in many fuel uses. So a lot of that
4 money is spent to buy foreign crude, so there is two-pronged
5 attack by gas against that deficit. And I use that as kind
6 of an overall sort of nationalistic Canadian reason to
7 continue gas exploration and marketing.

8 The finding of additional reserves, increasingly
9 additional reserves, over the last 15 years really underlined
10 a principle, and that is that more activity, the more wells
11 drilled, the more reserves found. I'm just going to go on to
12 another principle for you, and that is shown by this slide,
13 that with better economics, increased net-backs and
14 technology, more and more of a reserve can be accessed, and
15 I think a lot of you can relate to this, that most resources
16 have this triangular distribution where if there is a limited
17 amount or a lesser amount of the good stuff and an increasing
18 amount down the triangle of lower grade. This is true of
19 natural gas, wood, timber, metals. I was going to say
20 people, too, but then you have the individual rights people
21 all over you, so I will just cancel that.

22 This is true of natural gas, and in Canada, really,
23 the remaining surplus, remaining reserve, of 87 TCF that I
24 talked about largely occupies the very top part of the
25 triangle. But the industry, with activity, can start
26 working down. They can start developing the technology to
27 get down into those lower, much more vast reserves in the



1 lower grade rocks. So this is already going on to a really
2 large extent in the U.S. They have a pricing incentive for
3 what they call tight sand gas. These are fairly marginal
4 reservoirs, but with improved prices, they get up to three
5 times the normal natural gas price to go after these
6 marginal reservoirs. And they are really expanding the gas
7 reserves by learning how to handle these. Canada is just
8 starting now, and I think even in our own experience in
9 Grande Prairie shows us that there are tremendous reserves.
10 There is a lot of good stuff at the top of the triangle, but
11 there is a tremendous amount down the triangle. So it is a
12 matter of time and money to get to that.

13 So this is support for my statement that there is
14 a very large remaining reserve to get to in this country,
15 and that really is not considered by the NEB. They don't
16 consider what they call the unconventional reservoirs, down
17 into the bottom part of this triangle, in their projections.

18 Having a large reserve, you know, having abundant
19 gas reserves, has another major benefit, and that is the
20 displacement of the need for crude oil, as I have mentioned.
21 But there is something else about a lot of natural gas that
22 really isn't known by the public, and that is gas liquids.
23 You know, they understand oil, they understand gas, but they
24 don't understand a very, very valuable product from gas
25 production, and Alberta is really lucky in having a very
26 large amount of what they call rich gas, wet gas. In fact,
27 this area here has a lot of wet gas. It contains



1 condensates or NGL's, natural gas liquids. These are taken
2 out of the wellhead, taken out by gas plants and processing
3 facilities, and then you get butanes, propanes and all this
4 stuff. The rate of production in Canada now is about
5 230,000 barrels per day. It is very significant, and the
6 problem situation is that if gas supply of deliverability is
7 reduced as exports are reduced, the amount of gas liquid
8 recovery is reduced, too. So I call NGL's the hidden
9 oil field, and they are extremely valuable and they are
10 very underrated until now. There is a move afoot, though,
11 with the Energy Resources Conservation Board and the NEB to
12 recognize these and somehow spur exploration for those kinds
13 of reserves. They may do it by price incentives, or they may
14 give preferential markets to natural gas containing the
15 liquids, but somehow they all recognize the need to get the
16 natural gas liquids.

17 The next slide gets into sort of a near and dear
18 subject which is revenue, cash flow to the industry, and
19 really all I am illustrating here is the erosion of cash flow
20 in net-backs through the different agreements we have seen,
21 the NEP, the National Energy Policy, and the September
22 agreement. Now, we don't have the effects of the last
23 Budget, but it reduces our net-back slightly.

24 I will just run through a few numbers with you. At
25 the top, the pre-tax situation. This is price per MCF of
26 gas, per thousand cubic feet. Prior to the NEP, we were
27 getting \$1.78 for our gas in Alberta, and post-NEP, \$1.51,



1 and post-September agreement, about \$1.53, so that hasn't
2 changed too much, but it is a very significant erosion from
3 last year.

4 Now there is a comparison here, also, to the U.S.
5 net-back for gas; this is on a Montana gas price at the end
6 of 1980, that is \$2.44 U.S. per thousand cubic feet. So we
7 are already falling behind in price, and that is in U.S.
8 dollars, too.

9 After tax, the situation is this. Pre-NEP we were
10 getting .82 cents per thousand for our gas, post-NEP, .58
11 cents, and following September agreement, we were getting
12 .59 cents. So there is a very significant erosion, greater
13 than 25 percent erosion, to this point in time. Just to
14 compare that and the after-tax situation in the U.S., it is
15 almost a three to one ratio. Well, you have to be a little
16 careful with these numbers, you have to watch everybody's
17 numbers, because people can always use them to advantage
18 and you may not always know what went into them.

19 These numbers refer to Canadian Hunter, and each
20 company is in a different tax situation and also has
21 different operating costs, and there are different royalty
22 scales, too. These net-backs are after royalties and
23 operating costs. So these are worked out for an Alberta gas
24 well and using Canadian Hunter's own economic parameters.
25 Just to give you an idea of the significant erosion of the
26 cash flow to the producers, and the point is this is one
27 problem only, the other problem is markets. Without markets



1 the industry can't afford to keep drilling and shut in gas
2 wells. They need to have these tied-in to maintain the cash
3 flow.

4 This is a problem that many small companies, in
5 particular, face, and they have had to either go elsewhere
6 to the U.S. to get cash flow or else shut down entirely.
7 It is the small companies who really do suffer, and it is
8 the small Canadian companies who suffer the most. Their
9 contribution is vital for oil and gas. The small companies
10 in Alberta drill three-quarters of all the wells, and they
11 actually find most of the reserves. So when you damage
12 their financial ability, you damage gas exploration and oil
13 exploration.

14 Really, the last point I will make in this part of
15 the talk is that if you reduce exploration overall, you
16 really hurt gas and oil, and the two are found together.
17 They are not always easy to separate, and if you do reduce
18 exploration in total, you reduce oil findings, and probably
19 at this point in time in our history, that is probably the
20 most critical point is that in reducing the gas program,
21 you reduce your oil program, too.

22 That kind of wraps up the sort of overall
23 economics and the supply/demand and the price and market
24 scenario for gas, and this is where we are today. One
25 other comment I will just finish off with is that we do
26 have a surplus, and I believe it should be maintained to
27 give us all the energy options we can get. But the real



1 crisis probably will be supply, will be deliverability, and
2 this is where on the short-term and the long-term, the
3 pricing and markets have to be there to let the industry get
4 that deliverability up. That is where the real crisis
5 comes. That is the crisis the NEB refers to, and in our
6 estimation, they haven't taken the right steps to handle it.

7 So what I am saying is, what we really recommend
8 on the very short-term is building more gas plants and really
9 upping the production capabilities of gas plant pipelines,
10 et cetera, and hooking in more wells. The exploration phase
11 of it should be maintained over a longer term, but the
12 short-term crisis is in production capability.

13 I would just like to move on to this area, to the
14 Grande Prairie area, and demonstrate a lot of these
15 principles in reference to the deep basin or the Elsworth
16 gas field.

17 This did not reproduce too well, but this is
18 starting on a grand scale here, this is an oil and gas
19 distribution map of North America. The red areas are
20 natural gas, and the green areas are oil fields, and you can
21 see that Alberta and the western Canadian basin really
22 stacks up very well against any competitors. It is a very,
23 very prolific area, and it is mostly a gas area. The
24 black dot up in the northwest corner, I think you can see it
25 there, that is where we are right now. That is Grande
26 Prairie, and you can see a large area outlined just to the
27 west of it; that is the deep basin. I will just move ahead



1 to another slide that puts that in perspective, gives you an
2 idea of the location in Alberta and the size of it.

3 What this is, it is a 26,000 square mile area that
4 was really first recognized by Canadian Hunter as having gas
5 saturation in many, many horizons, many sub-surface formations.
6 They arrived at this by looking at all kinds of oil field
7 wells all throughout the province, and came to realize that
8 this area had an awful lot of gas which had been drilled
9 through and missed by many, many companies, and really you
10 can see the Elmworth area. That is just a very small part of
11 it; that is really the only part that has been developed,
12 explored and developed, to any great extent at this point in
13 time.

14 I am just going to take you back a couple of years
15 to this area in 1977, and then we will come forward to the
16 present. In 1977, the drilling was just really taking off
17 here, and I'm sure Grande Prairie was starting to feel the
18 effects of it in stepped up activity, more people. But
19 a number of important gas wells, these are shown in red, had
20 been drilled, and the industry was starting to recognize
21 that there was something really big going on out here. This
22 is prior to any production, and just for reference here,
23 Grande Prairie is about where the black dot is to the
24 northwest here. So that activity was taking place on the
25 southwest corner of the overall Peace River block.

26 This is 1981, and the comparison is mind-boggling.
27 In just a few years, industry has been in here with up to a



1 hundred rigs and they drilled 500 wells, most of them gas
2 wells, all throughout the area. Now I have to admit this is
3 a little bit bigger area than the preceding one, but some of
4 the gas wells at the very top were there prior to 1976/77.
5 But most of the wells are very significant, large gas wells.

6 So this is the Elsworth and deep basin field that
7 you hear about, and it has just a phenomenal impact on the
8 whole area. In fact, in the large part, it is why Grande
9 Prairie is so big today, and why it has grown so much.

10 Well, in 1979, the activity out here reached a
11 peak. We had, I think it was, 22 rigs going in the field at
12 that time, and we now have 3. So our activity has really
13 dropped off, and really there is two reasons for that. The
14 first is the overall pricing, marketing situation, mainly
15 markets for gas out here. The second thing is this going
16 over the hump or going over the boom is typical of most
17 field discovery areas, that after a couple of years the
18 initial rush is over and the whole thing settles into an
19 orderly, hopefully more planned, process, and it settles
20 into more of a production phase.

21 The exploratory drilling here now is moving out
22 into B.C., north and west into B.C., and it is moving down
23 into the south area which is Wapiti and down towards Edson.
24 It is still going on, but it is moving out of this area.

25 But this is such a huge development that it is
26 going to continue affecting Grande Prairie and the whole
27 Peace River for many, many years. But I think with the



1 settling down there is a chance now for everybody, you know,
2 the companies, environmental planners, and social planners,
3 to really handle it, to catch up and to start to really plan
4 for it. It is a part of the community, and if not properly
5 handled, it can have a very major impact.

6 I just want to go on and talk about gas reserves
7 in the deep basin, why all this activity, and why people are
8 really in here spending a very large amount of money. In
9 going back to that triangle again, the reserves and
10 distribution, it is the same distribution that to date really
11 the drilling has proved up or has discovered, in Canadian
12 Hunter's estimation, about 5 trillion cubic feet of gas;
13 that is 5 TCF. Now the NEB says 3, so there again, it's a
14 gap between different numbers. There is still a great -- it
15 is a very, very sizeable amount of gas.

16 Then as you move down the triangle, this is the
17 future reserve that we feel we can get. We feel that we can
18 achieve 33 TCF with the proper economics, but more
19 importantly, with the markets available. So that's, if we
20 drill up the rest of the deep basin northwest and southwards,
21 that is the recoverable gas reserves, and that may take 20
22 years to get to, but it is a huge number.

23 The 100 TCF is moving down into the lower grades
24 gas reservoirs, the tighter sands, the more difficult rocks
25 to complete and handle, and we are saying that given major
26 improvements in technology, having the right to cash flow
27 and incentives to spend money on technology, we can get to



1 that number, and this involves tremendous advances, of
2 course.

3 Now the bottom number, the 400 TCF, really just
4 relates to the gas in place. That means that there is a
5 tremendous volume of gas in place, but we know that we will
6 only get a quarter or maybe 30 percent of it, so 100 TCF
7 plus, under the best technical pricing conditions.

8 Anyway, that gives you an idea of what a monster
9 this is sitting out here just west of Grande Prairie and up
10 and down the province for many, many miles. The impact on
11 Grande Prairie is obvious, and really this gas field is
12 going to have a major impact on the country. If you recall
13 what I said about the remaining reserve of 87 TCF, or 67 if
14 you use the NEB's remaining reserve number, either one, this
15 is huge. In effect, you're probably wondering why with such
16 huge reserves you would continue to be recommending
17 exploration; well that is actually true. A find such as
18 this actually does have the effect of reducing the need for
19 more very active exploration. That is the marketplace; that
20 is the balance. So it is true, this one is big enough to
21 actually reduce the need, and it really reduces the need
22 for frontier gas well into the future. Frontier gas won't
23 come on until the 1990's anyhow, but with development of
24 a field like this or more, it puts that need back well into
25 the 2000's. So I am just underscoring something I said
26 earlier, and that is that the western Canadian sedimentary
27 basin really has a tremendous amount of gas to offer, a lot



1 more than it is really given credit for. But it requires
2 the proper handling, economics and markets to get to it.

3 That tells you why we are going after it, and why
4 we would like to continue exploring and developing. Getting
5 back to this slide again, I would like to talk about the
6 production from the field and what levels of production are
7 actually flowing from it, and what predictions we are going
8 to make. Martha, if we get a chance along here somewhere,
9 we will talk about plants.

10 Right now in 1981, this time in 1981, there are six
11 gas plants operating in the field. So they have been built
12 over the last two years, and they are actually marketing.
13 They can produce about 600 million a day, they are selling
14 about 430 million, so this is the supply and the supply
15 capability. They are operating below their total
16 capability because of markets. They are still on-stream,
17 and maybe I'll just step over to the screen and show you
18 where they are.

19 This is the Elmworth back up here, and this is a
20 very large plant, and Canadian Hunter has four plants, one
21 here, with partners, and then one here and two more small
22 ones down this way. So the field is on production now in a
23 major way, and by this time next year there will be nine
24 gas plants out here, and these will be producing about a
25 thousand million cubic feet a day. A thousand million, that
26 is 20 percent of Canada's daily gas needs. So that is why
27 this field is receiving so much attention. It has not only



1 got the reserves, it has got tremendous deliverability or
2 supply capability. So by next year we are saying we could
3 achieve 20 percent of Canada's daily gas requirements from
4 this field.

5 I am going to project that further, and in 1985
6 with the proper markets, this deliverability can be expanded
7 to 2,000 million feet a day, 2 BCF a day. That is close to
8 40 percent of Canada's daily demands in 1985. So this is
9 huge, and I think a lot of people don't really understand, or
10 can't really relate to the size of this field. It is going to
11 be the biggest gas field in Canada, and as you can see, I
12 don't have to say what kind of impact this will have on the
13 Grande Prairie area. It has had, and it will continue to
14 have. This will take thousands of wells to develop and it
15 will develop over a huge area. So really, everybody has to
16 understand and be able to handle it, to plan for it.

17 There is another feature shown on the slides which
18 I will relate to you, and I don't know if you can see it
19 properly. There is a green line running down the centre of
20 the graph; it runs right through the middle and then off
21 to the southeast. That is Peace Pipe Line's liquid line
22 coming out of the field, and it is carrying crude from north
23 of the deep basin, Elsworth, but it is also now carrying a
24 lot of NGL's, the natural gas liquids, from the field.
25 Elsworth has a real plus; it is very rich in liquids, and
26 we estimate the reserves, recoverable liquid reserves in
27 here in this area, at 250 million barrels. That is a huge



1 number. That puts it on par or greater than, say, the West
2 Pembina oil discoveries that have been taking place over the
3 last couple of years. It is a huge liquid find, and of
4 course, that will take more development to fully realize.
5 But I would just like to point that out, that the whole deep
6 basin is going to be a major source of liquids. So it is a
7 gas field and in a way it is also a giant oil field and
8 something that you will like to hear, it is sweet gas out
9 here.

10 I am not technically prepared to defend myself on
11 sour gas; I haven't done much work with it. I thought I
12 would say that early, so I could be armoured.

13 This is just to summarize the deliverability
14 capacity out of the field, and the point is that by the year
15 2000, we are saying that with on-going exploration
16 development, we will be seeing 2,000 million a day; that is
17 40 percent of Canada's daily requirements coming out of this
18 one giant field.

19 Just to drop back or to go back to that prediction
20 graph, the supply/demand graph, the 2,000 or 2 BCF a day,
21 works out to around three-quarters of the TCF a year of
22 additional supply. If you look at the supply and capability
23 curve and just add this one area alone, you can see that it
24 just all by itself significantly raises the supply
25 capability curve. It puts that crisis, that 1995 crisis,
26 down the road quite a bit.

27 So that is the point, is that it not only raises



1 supply capability, it will also raise the yearly addition
2 curve above it, too. So the whole reserve will rise, and the
3 supply capability is going to rise, given the right
4 conditions.

5 Okay, here we go - gas plants. This is the
6 Elsworth gas plant, it's about 25 miles south and west of
7 Grande Prairie, and this plant is currently -- it is Canadian
8 Hunter's biggest plant -- it is currently running at about
9 300 million per day; that is the amount of gas it is selling
10 today. It's capacity is being upgraded to about 430 million
11 for delivery by November 1982. So this plant alone, one
12 installation, one gas factory, if you will, is going to be
13 actually flowing 7 percent of Canada's daily requirements.
14 This is a sweet gas plant; it has no sulphur, no hydrogen
15 sulphide, and we have only developed sweet gas in the basin
16 so far. There is some sour gas on the east side, but we
17 currently have found none ourselves, and we are producing
18 none.

19 That is not to say, we are not trying to shirk our
20 responsibilities in understanding it and knowing how to
21 handle it, it is just that so far the development has not
22 come across any.

23 This is a pretty small installation for the amount
24 of gas that actually flows through per day, and the reason
25 is it is sweet gas. It doesn't take much processing
26 machinery in the installation. It is the best you can get,
27 so that area is very blessed that way. These are pretty



1 small plants for what they can do, and the process is pretty
2 safe and clean. There is a small gas by-product from there;
3 there is no smoke. There is very little emissions from a
4 plant like this, and I'm just going to back a bit here
5 that our company, and probably Dome and Chieftain, have
6 really gone out of their way to clean up these plant sites
7 and really uses the smallest facility possible to handle the
8 maximum amount of gas. This is just after construction and
9 since then it has been cleaned up all around. It is very
10 difficult to even see driving by; it just doesn't stand out.
11 So maybe we are setting a guidelines or a level for industry
12 to achieve in gas plants.

13 Now, as I said, I'm not going to handle sour gas
14 plants; that gets into another realm of difficulty and size.
15 Something else regarding land use, and I was listening to
16 your discussion on land use classifications, and all the
17 rest of it, there is 150 miles of gathering systems coming
18 into this plant through all the surrounding fields. But if
19 you were to drive out there today, you wouldn't see much of
20 it. You would see very little evidence, a few wellheads
21 here and there, but very little surface disturbance, and
22 that is something that the operators in this field have
23 really spent a lot of time and money doing, that is,
24 returning the land to the state they found it in, back into
25 productivity as farm land, whatever, and we are proud of
26 that, but that doesn't say that there isn't a lot more to do
27 there certainly is. But there has been a real effort here to



1 fit this whole giant development into the farming
2 community, and I think I can say that it has paid off that
3 in putting in those 150 miles of pipeline, we didn't have
4 one intervention from the local people, from the farming
5 community. That is through working with them and
6 understanding what they wanted, and following the most
7 stringent guidelines about burying the gathering systems,
8 et cetera. So if done right, we can really reduce the impact
9 of this kind of development.

10 Now the whole field of development down into the
11 south Wapiti area, you get into a different type of
12 situation there. That is more forest, foothills kind of
13 country. So we are having to really watch ourselves there
14 with stream crossings and all the rest of it, and we have
15 got a biologist who helps plan ahead for us. I guess I'm
16 stating that we have a commitment not to mess the place up.
17 We realize what we have to do in the way of developing, but
18 we also realize that responsibility to keep it clean as much
19 as possible.

20 We can discuss that afterwards; I think it is a
21 very crucial point to a group like this.

22 Just in way of summary, to sum the whole thing up,
23 the activity in the basin has reached a peak in 1979 and it
24 has now come over the top and is settling down into a very
25 long-term development. And exploration is still going on,
26 but it is going on more so down in the southwest towards
27 Edson, and it will go into B.C. in a big way.



1 The reserves found out here and the supply
2 capability just indicates this to be one of the largest
3 fields ever found in North America, and certainly it will be
4 the largest in Canada. So this is going to have a tremendous
5 impact, and it requires a lot of planning to handle -
6 environmental, social, et cetera. The gas reserves here
7 really do give Canada a lot of options in energy; this is a
8 tremendous find, and so this will have tremendous impact in
9 the future, and it is going to have a tremendous impact on
10 Canada's financial health.

11 Thank you very much. That is the end of my formal
12 part of the talk.

13 MR. T. SHEWCHUK: I'm sure that some of you have
14 questions, and Mr. Jackson has agreed to answer questions.

15 MR. C. DUNKLEY: Two questions, Paul. We were
16 fortunate to have Joe Mercier speak to our study group about
17 a year-and-a-half ago, and I wonder if you mind telling us
18 what progress has been made with regard to allowing drilling
19 on fence lines instead of in the centre of quarters, and
20 there may be people here, too, that would enjoy hearing your
21 explanation of the need for flaring here and there and all
22 around the province.

23 MR. P. JACKSON: On the placing of drillsites in
24 fields, in agricultural land, there has been a tremendous
25 conflict between the industry and the farming community
26 regarding placing of wells which then take a lot of land out
27 of production and make access difficult. The industry is to



1 blame to a large extent, but in some cases, the terrain, et
2 cetera, forces them into certain locations. But anyhow, the
3 Energy Resources Conservation Board has just passed a ruling,
4 I think about a year ago, really forcing the companies to
5 smarten up, and where they can, to move to fence lines in
6 each quarter section, to move over to the edge of the quarter
7 and put the wells in there. So the access roads are
8 minimized, and they have actually enacted legislation to
9 reduce the size of the producing lease so that there are a
10 lot more controls that have come in.

11 I think we are ahead of them on that one beginning
12 here in that we were doing that before they enacted that
13 legislation as a result of talking to the local farmers.
14 The soils, for example, in this area are very fragile, very
15 thin, and any reduction of area capacity is critical up here.
16 So right from Day 1, we have really tried to move these
17 things over and minimize a loss of agricultural land.

18 The second part of your question was again?

19 MR. C. DUNKLEY: Flaring?

20 MR. P. JACKSON: Okay; flaring. Historically, if you
21 travel all around the world today you see in any oil and gas
22 producing area monstrous gas flares, and most countries, or
23 most continents, flare a lot of gas, because they have no
24 market for it. There is no way to get it vast distances to
25 markets. But in North America there is less than 5 percent
26 of the gas is flared, so how do we flare it, why do we flare
27 it. Well, in some cases, you might have an oil well which



1 has some gas production which is very, very minimal, it
2 doesn't support tying the gas production in, so that is
3 flared. But the Conservation Board really controls that,
4 they really look at that, and if they feel there is a need
5 to tie that gas in, you have to tie it in.

6 Then another thing that you see around here as
7 Elsworth develops is flaring, and what this is is production
8 testing, and it can go on for sometimes five to six days.
9 When you drill a well and find some productive horizons, you
10 have to test them to see if they are going to hold up for
11 long-term production, if they are going to be commercial
12 over a length of time. So these are tests that you see.

13 They can be pretty substantial; you can see often
14 25-30 foot flares, and that is a phase of gas field
15 development, and once again, the Conservation Board limits
16 the amount of flaring you can do in that area.

17 Then there are some flares from gas plants; there
18 are certain gases that are unusable and have to be disposed
19 of, so those are the residual flares you see at gas plants.
20 Does that cover it?

21 DR. M. KOSTUCH: I guess my reputation is spreading
22 around the province. I'm not opposed to natural gas
23 exploration; I think it is one of the options that we have
24 to certainly consider. It may be preferable to nuclear
25 power; I would certainly consider it preferable to nuclear
26 power. It may be preferable to coal-burning, however, it
27 may not be preferable to certain of the renewable resource



1 developments, and it may not be preferable to conservation.
2 I certainly think that more effort should be put along these
3 lines and we shouldn't necessarily have the need for more gas.
4 We should be doing more conservation and more looking at
5 other alternatives.

6 Your first graph there showed one of its curves was
7 authorized exports. Now in view of what we have gone through
8 this morning in a Mike Muc trick, does that mean there is
9 unauthorized export?

10 MR. P. JACKSON: No, I don't know if they are
11 sneaking across the border; we sure don't know that. All
12 that means is the National Energy Board just authorizes
13 certain levels of export. They firmly control the export
14 levels so producers can only go up to those levels. But what
15 actually happens in reality right now is they are setting
16 such a high price at the U.S. market that the U.S. has said,
17 well we are not going to take it all at that price. They can get
18 Mexican gas at two-thirds of the price, for example, and we
19 are not currently right up to that export level; we are
20 somewhat below it.

21 DR. M. KOSTUCH: The other question is on the
22 environmental impact. It looks to me like there is going to
23 be a massive regional impact. What sort of studies have
24 been done on the regional environmental impact?

25 MR. P. JACKSON: Each company employs different
26 groups to do these studies, and sometimes it is coordinated
27 and other times not, and I will just go through some of ours.



1 We have got a group doing a soil reclamation study, and Dr.
2 Bentley may be aware of them, possibly, but they are looking
3 at leaf reclamation, ditching reclamation and any surface
4 disturbance reclamation, and we actually have an advance
5 plan for us, too. We also have what we call a surface
6 landman, and this fellow goes out ahead of time, often with
7 these reclamation study people, to work the plan ahead of
8 time, to put the wells in the best place with the minimal
9 surface disturbance. So that we study it beforehand, then
10 we study it to do the best to reclaim it afterwards. Then
11 we also have wildlife studies going on, because as we move
12 into the more remote areas, you have really sensitive
13 populations of moose in the Wapiti area, and grizzlies, and
14 we have got a biologist on staff full-time, and what he is
15 doing, he is actually researching ahead of us throughout
16 these areas. Also, he has to give approval for any of our
17 sites, and his approvals are forwarded on to the Fish and
18 Game people and the various land use people, and it is a
19 neat relationship in that they are now relying on him to
20 quite an extent to tell them what it is like down there.
21 The problem is that there is no data on what happens when you
22 go into these areas, so even we don't really know the impact,
23 so that is the reason for him.

24 From what he can see, to date it has been pretty
25 minimal. I will just relate to you something about a
26 grizzly bear study this fellow did. He put transmitters on
27 about 14 bears down there, he tranquilized and radio-equipped



1 14 bears and tracked their movements, and they have been
2 doing this for two years. These reports will be made public
3 and they're going to various government bodies. But they
4 found the bears didn't seem to be affected whatsoever by
5 lease roads. In fact they had a sow grizzly camping out
6 beside a drilling rig for two weeks; she didn't move and
7 didn't come off the rig itself. So we are studying these
8 things and trying to work around them. But we have to, you
9 know, they are sensitive, and we could mess it up, you know,
10 and we are trying to --

11 DR. M. KOSTUCH: Have you done a regional impact
12 assessment?

13 MR. P. JACKSON: We have used the eastern slope
14 study, and that is a very, very, thorough study of
15 environmental impact and they have zoned different areas. I
16 am sure a lot of you are aware of that.

17 DR. M. KOSTUCH: Is that the eastern slope's policy?

18 MR. P. JACKSON: Yes.

19 DR. M. KOSTUCH: That is certainly not an
20 environmental impact assessment.

21 MR. P. JACKSON: There is a lot of preceding studies
22 to that which designate a lot of the river bottom areas as
23 critical areas or less critical, and they have had studies
24 going into that. I guess your comment is maybe that is not
25 good enough.

26 DR. M. KOSTUCH: That's not good enough.

27 MR. P. JACKSON: Right. The reason we have this



1 advance planning going ahead of ourselves, we are also
2 using our own.

3 DR. M. KOSTUCH: I would like to see a regional
4 impact assessment of what the regional impact of the
5 development of these fields would be.

6 MR. P. JACKSON: The work we are doing is regional;
7 we are not just going site by site. We do that, too, but we
8 are also doing an overall assessment. In fact, there is an
9 on-going one now to look at -- it's been going on for a
10 while -- to look at the fish populations in the rivers in
11 the Wapiti area, the movements, so that we can plan our
12 creek crossings and river crossings at the right time, we
13 can trench them at the right time when the fish aren't in
14 the streams. They move in and out of those streams at
15 different times, and we're trying to match that up, and that
16 requires the whole drainage basin. So, we are doing that
17 right now, and we will be using that.

18 DR. M. KOSTUCH: The other thing is, how sweet is
19 your sweet gas?

20 MR. P. JACKSON: There is no sulphur whatsoever.

21 DR. M. KOSTUCH: Zero percent sulphur?

22 MR. P. JACKSON: Zero, right; there is sour gas in
23 the area. Petro-Canada --

24 DR. M. KOSTUCH: Most sweet gases contain some
25 sulphur. You are sure about that?

26 MR. P. JACKSON: It is below a quarter percent; it
27 is a minimal, minimal amount in the gas.



1 DR. M. KOSTUCH: Because sweet gas can be anything
2 below 5 percent?

3 MR. P. JACKSON: Right.

4 DR. M. KOSTUCH: That is my understanding.

5 MR. P. JACKSON: This is very, very sweet. We have
6 no sulphur removal equipment whatsoever in our plants; there
7 is no need for it. There is sour gas in the area; we have
8 a formation in this area of sour gas, but it is a very
9 difficult formation to handle and we haven't tied any of it
10 in.

11 Petro-Canada has a plant which handles gas from a
12 deeper horizon; this is sour gas, so there is some in the
13 area. Let's just be straightforward; eventually development
14 will see some sour gas facilities in place in the region.

15 DR. M. KOSTUCH: I'm very concerned about sweet gas,
16 though, because we tend to shove it to the side and say
17 don't worry about it, there is no problem. But we do have
18 emissions from sweet gas that can be harmful.

19 MR. P. JACKSON: Right.

20 DR. M. KOSTUCH: What monitoring are you doing to
21 ensure that there is no harm occurring in the long-term?

22 MR. P. JACKSON: We have stack monitoring, as all
23 plants are required to have, and I really don't know the
24 exact details of how much and what we are putting into the
25 atmosphere, and I can get that for you. In fact, we can get
26 it right from Grande Prairie here from our office; we have
27 our regional production office here. But the only thing I



1 can relate if you look at that flare it is totally smokeless.
2 You don't believe that?

3 DR. M. KOSTUCH: Well I don't know that smokeless
4 means harmless.

5 MR. P. JACKSON: Right, but I am saying there are
6 minimal emissions from these plants compared to other plants.
7 I am not saying there are no emissions, that is unrealistic,
8 but if you would like that data, I can sure get it.

9 MR. BILL FLOOK: May I make a comment?

10 MR. P. JACKSON: Certainly.

11 MR. BILL FLOOK: At 2 billion SCF a day of gas, even
12 a quarter of a percent has 5 million SCF of hydrogen sulphide
13 a day. If you have absolutely no sulphur removal equipment,
14 then it must be assumed that you are putting 5 million SCF
15 of hydrogen sulphide a day into the area.

16 MR. P. JACKSON: I don't have the exact percentage,
17 but it is either -- it is so small that we haven't put any
18 equipment because there is no need for it. In the monitoring
19 and gas analysis, we do gas analysis on all exploratory
20 wells on all production all the time, has shown that there
21 is just a micro-fraction or none at all. I have not heard
22 the exact numbers. If there is any, it has got to be very
23 fractional. I agree with you, if there is enough volume
24 you're going to get the sulphur that way. But I just have
25 to back up here and say I don't have that fraction, but I
26 know it is very, very small.

27 I am just going to fall back on the reputation of



1 our production group. If there was any need whatsoever, it
2 would be there. We would have what is called an iron sponge
3 in the plant, or whatever, to remove that fractional part.
4 This really is very, very sweet gas, very clean sweet gas;
5 in fact, it is the highest heating value gas you can get.
6 It has got the highest BTU value, so we are fortunate, but if
7 there is an H_2S problem, we will certainly address that.

8 MRS. J. ROSCHLAUB: Mr. Jackson, I represent a group of
9 local farmers. What percent of your 33 TCF would you
10 estimate to be sulphur?

11 MR. P. JACKSON: That really goes back to the
12 preceding question. I am saying it would be just minuscule.

13 MRS. J. ROSCHLAUB: How about the 100 TCF?

14 MR. P. JACKSON: Those projections are all made on
15 sweet gas. I am talking about what is really Mesozoic gas,
16 which is in the upper part of the section, the cretaceous
17 part of the section. These are Hunter's numbers; we have
18 done these through different studies, and we haven't put in
19 any of the horizons which have sour gas. I have mentioned
20 there are some, the halfway sand for example, some of the
21 deeper Devonian units have sour gas, but those numbers don't
22 include any sulphur reserves or H_2S rich reserves at all.

23 MRS. J. ROSCHLAUB: What you are saying is if you go
24 further down, then you're into more sulphur?

25 MR. P. JACKSON: Yes, some of the older horizons do
26 have different percentages of H_2S .

27 MRS. J. ROSCHLAUB: There are a couple of sour gas



1 plants in the works now. You mentioned Chieftain and there
2 is one up by Silver Valley, too.

3 MR. P. JACKSON: Yeah, that is part of my problem, I
4 don't know exactly what they are developing in any of these
5 areas, what other people are developing. I mentioned Petro-
6 Canada has the Goat Creek plant, and there is exploration for
7 sour gas east of Grande Prairie in the Tepee Creek area. I
8 know up in there there is some exploration, so, yes, there
9 will be development; I don't think we can get away from that.

10 MRS. J. ROSCHLAUB: But would you agree that sour gas
11 plant emissions have potential for eventual environmental
12 acidification?

13 MR. P. JACKSON: I agree they probably have potential
14 but I don't have any idea myself as to how much potential.

15 MRS. J. ROSCHLAUB: Are you aware that farm land here is
16 often a hundred times more acidic already than in the
17 traditional sour gas plant fields such as around Pincher
18 Creek?

19 MR. P. JACKSON: I knew it was very acid soil from
20 our different studies, but I didn't know it was that ratio to
21 Pincher Creek.

22 MRS. J. ROSCHLAUB: Plus it lacks the soil buffers that
23 they have there.

24 MR. P. JACKSON: Right.

25 MRS. J. ROSCHLAUB: What financial solutions would you
26 recommend to farmers here who face decreased yields and
27 therefore decreased financial returns from sour gas plant



1 activity?

2 MR. P. JACKSON: You're assailing me with a problem
3 we currently don't have, but I guess I will take it anyhow.
4 What can be done. Well, I think there is all kinds of
5 pressure on industry to minimize the impact of emissions,
6 and I agree with that. We know it's a problem, the industry
7 knows it; the various regulatory bodies are trying to change
8 the regulations to reduce emissions. So I think that public
9 pressure is always good. I think reasonable public pressure
10 to make positive recommendations or statements about it,
11 that is always reasonable.

12 MRS. J. ROSCHLAUB: Well, we are making some progress,
13 then, because if the people in the sour gas industry will at
14 least admit there is a problem, then we have come one step.

15 MR. P. JACKSON: Yes.

16 MR. G. PASCHEN: Gerry Paschen, Non-Renewable
17 Resource Study Group. To begin with, you kept saying from
18 time to time that everyone has to understand the impact this
19 particular field is going to have in the future. You also
20 indicated that there is now something like three to five
21 trillion cubic feet of proven gas reserves. Now, everything
22 else below that is possible and probable, is that correct?

23 MR. P. JACKSON: That's correct, yes.

24 MR. G. PASCHEN: Therefore, the bank can not give
25 you any money; I mean, you can not borrow on possible or
26 probable reserves?

27 MR. P. JACKSON: You can borrow on a certain portion



1 of it; they will always give you some fraction. It depends
2 on the risk of it. Money is loaned on established reserves
3 which includes a certain amount of the proven and a certain
4 amount of additional probable. It is some fraction of the
5 probable. But you're right, you can't borrow on the whole
6 works, no.

7 MR. G. PASCHEN: So then looking at the issue of
8 flaring as one little sidestep, industry does not pay
9 royalties on flared gas, is that correct, including testing
10 that is?

11 MR. P. JACKSON: I think you're right; I don't know
12 for sure, but I think you're right. That is probably one of
13 the reasons it is restricted, too, by the ERCB; they don't
14 want to see that go up in the air. I don't really know; I
15 can't answer that question on gas flaring.

16 MR. G. PASCHEN: We know because we have made some
17 research into this. Now, Canada's deficit is relatively
18 great, and with the proven reserves of three trillion cubic
19 feet of gas or even five, can not be very much of a
20 contribution over our trade deficit. Martha raised a
21 question about conservation, and I think it is a valid one,
22 but when you people are trying to test the capability or
23 deliverability of a field like that, then all you're really
24 trying to accomplish is to find what the production is and
25 then ultimately looking at the long range to sell it. You
26 know, go and merge with another one, get rid of it, so that
27 you have a greater cash flow rather than waiting now trying



1 to get a better return on your investment such as 54 cents;
2 is that correct?

3 MR. P. JACKSON: Yes, we need markets, yes, right.

4 MR. G. PASCHEN: So because the proven reserves are
5 there, all you really want to accomplish in the long run is
6 an export market, because that is where the customer is
7 right now.

8 MR. P. JACKSON: On the short-term that's right,
9 that's where the cash flow is to allow deliverability to be
10 raised. Let's go to that for a second. I think that is the
11 near-term crisis is the produceability of the field,
12 deliverability of the field and the meeting of supply. But
13 we are saying that that is a solution for the short-term
14 problem, and then decisions can be made down the road to
15 continue exports, expand them or whatever. We are saying it
16 should be maintained and there is room to expand them to
17 handle the deficit problem and to get the industry into a
18 position where it has got the finances to do something else.
19 Right now there is a lot of companies that can't handle the
20 frontier areas. They can't go to them; they can't handle it.
21 They can't even handle oil exploration because they don't
22 have any cash flow. There are a lot of companies, Joe
23 Mercier may have explained this to you, that many companies
24 are sitting on hundreds of shut-in gas wells, and you can
25 only borrow money against those for so long at 20 percent
26 interest before the bank calls the loans and you're out of
27 it. So having shut-in gas reserves is hurting many, many



1 companies.

2 MR. G. PASCHEN: Therefore it is a great speculation
3 would you agree with me, that people going into the area and
4 trying to find the reserves under the speculation that it
5 may be sold and therefore it is shut in?

6 MR. P. JACKSON: Right.

7 MR. G. PASCHEN: Assuming that a market will be
8 found for the five trillion cubic feet, and cash flow is
9 coming in very slowly, then they will be left with an
10 incentive to drill further because all our gas beyond that
11 which is consumed to be probable or possible will be then
12 beyond economic reach, and that is most likely the reserves
13 which go to the Canadian consumers; is that the way I see
14 it, correct?

15 MR. P. JACKSON: Well, okay, you have got a whole
16 bunch of issues criss-crossing in there. Okay, as I
17 mentioned, when you get a big find like this, it does have
18 that effect. It does reduce the need for high levels of
19 further exploration down the road. Okay, that's true,
20 that's the marketplace by balance/demand situation. But we
21 are also saying that we are not just relying on export
22 markets, we are saying that the Canadian usage should be
23 maximized, hopefully well above what the NEB is saying it
24 will be to the year 2000, which is 3 TCF per year. I just
25 went into one use, that is compressed natural gas, but
26 there are all kinds of other uses for it in all kinds of
27 fuel uses, industrial use. So I think as a Canadian



1 company, we know we want to make money, that's business, but
2 we are looking at supply in Canada first. That is the first
3 requirement, and then using the export market by having the
4 reserves to our advantage, and it benefits us on the short-
5 term by cash flow to continue. So we are giving something
6 away to get a long-term benefit is what I am saying, and it
7 does help the deficit problem.

8 MR. G. PASCHEN: Does Canadian Hunter participate in
9 investing the money in additional transmission lines to make
10 these fuels available to, as an example, eastern Canadian
11 markets? Alberta, as an example, has a very small population
12 in relationship to what is outside, like 21 million, and so
13 if the transmission lines are not in place to offset the
14 purchase of crude oil, and Hunter being one of the most
15 aggressive exploration people in this field having also now
16 three processing plants, but if there is no additional input
17 into those larger transmission lines, then we are missing
18 the point of trying to achieve probably energy self-
19 sufficiency or trying to get rid of that great deficit we
20 have at this time. So with all intents and purposes, I
21 would like to say that while you're in the field, to
22 communicate with the federal government to make sure that
23 those new volumes which are in place on the market in the
24 not too distant future can find their way into the Canadian
25 market and displace foreign crude oil. Can you give us a
26 promise that that will take place?

27 MR. P. JACKSON: I'm sure that the NEB is looking



1 after that. Of course, that is their purpose; they are the
2 watchdog of Canadian supply, and so they should be. We just
3 have some disagreements about the numbers they come up with
4 and the ways they go about solving the problems in terms of
5 deliverability, and as far as the facilities, as far as
6 energy to the east or anywhere else in Canada, Canadian
7 Hunter isn't directly involved in pipelines; we don't have
8 the resources to do that. That is very costly. You take
9 the great debate when the TransCanada PipeLine was built,
10 those are phenomenal investments, they require many, many
11 companies to pool together to get the finances. We can't
12 handle it. We are getting involved possibly in some
13 downstream gas liquids processing, but not in pipelines.
14 But if the market expansion is there, the pipelines will be
15 built.

16 Now there is another point to make, that if you
17 regard, if you look at the Q & M Pipeline down to the
18 Maritimes, really that is not economic per se at this point
19 in time. But it is being put in there with government
20 encouragement to expand the market, and eventually,
21 hopefully, the marketplace down there will expand. Having a
22 starter supply, it will expand to where that line is
23 economic. You know that Alberta gas will be going to there
24 at a discount price anyhow, to initiate that market. Well,
25 if I was the president of a company, I would say that is a
26 poor investment at this point in time, but I think the
27 country is a tremendous investment; I support them doing that.



1 DR. G. GRIFFITHS: Graham Griffiths, Environment
2 Protection Study Group. I want to get on to this question of
3 exports. First, I think there is a little confusion in some
4 people's mind over the graph you put up of the federal
5 budgetary deficit, as I understood it. But that is an
6 internal transaction within the Canadian economy. You
7 started talking about the need for income from exports and
8 really the relevant figures are surely the trade balance
9 figures, and I think some people, judging from their
10 comments, have become confused over that.

11 Now recently we heard that President Reagan is
12 refusing to give loan guarantees on building the northern
13 tier of the Alaska gas pipeline, and there is some doubt as
14 to whether the capital to build that pipeline can be raised.
15 Now my understanding is that some of the export permits
16 issued by the National Energy Board for exports of Alberta
17 gas were issued on the assumption that that gas would be
18 replaced later by gas from Alaska. Do you happen to know
19 what happens if the northern tier proposal is abandoned by
20 the United States, is the NEB going to cancel some of the
21 existing Alberta export permits? I know maybe you are not
22 the right person to ask this; you are not Chairman of the
23 NEB.

24 MR. P. JACKSON: You're getting into areas that I am
25 not fully conversant, but let me try that. I think that is
26 a distinct possibility that may happen, that the NEB is
27 holding supply and demand hearings next summer looking to



1 expand the exports, or to continue export licenses. They
2 are already recognizing a need to export, a reason to export
3 I am sure they have taken into account what may or may not
4 happen with that pipeline in just stating that they would
5 have a supply and demand hearing.

6 DR. G. GRIFFITHS: I imagine by next summer it ought
7 to become clear just whether the United States is going to
8 build or not.

9 MR. P. JACKSON: Right. The United States is
10 exploring at a tremendous rate, and really there are other
11 things happening that may be deferring the need for that
12 pipeline is that they are going into vast tight gas sand
13 reserves, you know, through these pricing incentives. They
14 are getting all kinds of reserves built up themselves, and
15 they really are themselves deferring their own need by a
16 very aggressive exploration program. It is very active down
17 all through the U.S. for natural gas and oil. So that will
18 be coming into the picture, too.

19 DR. G. GRIFFITHS: Yes, their exploration program is,
20 of course, for the deeper reserves, which are more costly to
21 produce. You are probably well aware of the argument against
22 the case that we are, by producing too much of our deep gas
23 now, what we will be doing is ensuring that we pay a lot more
24 for gas 10 or 15 years' time, and will be the case if we are
25 restrictive and keep down our exports of gas at this time.
26 At the same time, there is a problem with many companies
27 having invested in exploration and they have got wells



1 shut-in and they need a cash flow. Now what is your
2 attitude towards proposals which have been put forward by
3 several political parties that there should be a government
4 reserve of gas, and that the government should go in and buy
5 out companies wanting to sell shut-in wells and just hold
6 these for ten or twenty years or whatever, before that gas
7 would be produced? Would that be of significant assistance
8 to some of these producers who are now in trouble?

9 MR. P. JACKSON: They are talking in levels, I
10 believe, of \$400 million worth of gas purchasing assistance,
11 which really is not very much. Maybe in the overall reserve
12 picture, in the shut-in reserve picture, it is not a great
13 deal, so I don't think the current plans would have that
14 much impact.

15 DR. G. GRIFFITHS: How much should be bought by the
16 government, do you think, to have a good impact?

17 MR. P. JACKSON: I think, I am saying none, I am
18 saying the industry can tolerate a certain level of shut-in
19 gas, and they know that. I think in exploring anywhere in
20 the world, you always know you are going to have some
21 shut-in gas. Your reserve is going to be well in excess of
22 deliverability at any time. There are very few areas,
23 maybe more mature areas, where your reserve and deliverability
24 are matched up. So to a limit, the industry can accept a
25 certain amount of it, and they plan for that financially.
26 For example, in doing economics in Alberta, we build five
27 to six to seven years' sale delays into our economics just



1 to allow for that sales delay, for that shut-in period.

2 So we handle ourselves to a great extent, and I
3 don't know, marketing boards and purchasing boards scare me.
4 I guess the example I like to put out is in the mid-'70's,
5 the Canadian Egg Marketing Board wound up with 5 billion
6 rotten eggs. They didn't read supply-demand situation
7 properly.

8 MR. T. COTTRELL: Mr. Jackson, my name is Tom
9 Cottrell; I am on the research staff of the Environment
10 Council, and I would like to offer you my compliments for
11 the presentation and the answers and having the courage to
12 jump into the lion's nest. A couple of quick questions.
13 You referred to 10,000 gas wells being shut-in; does that
14 mean that there is no pipeline to them so they actually
15 can't be involved in gas production?

16 MR. P. JACKSON: Some do have gathering systems into
17 them, but the majority of them would not be connected to
18 gathering systems. They are remote, you know, you have to
19 look at, there are shut-in wells that are close to
20 facilities and could be hooked in quite easily, and this is
21 a question that I raise myself is that the NEB is showing a
22 near-term deliverability crisis. There are wells, there are
23 a lot of fields, even, that are not connected right now,
24 which could be on a fairly short-term basis, within a short
25 period of time. So I think there are both those which are
26 close to facilities and could be hooked in quickly, and
27 there are individual wells in remote areas which are really



1 difficult to get to. But the problem is that it is the
2 chicken and egg situation, and the incentives aren't there to
3 develop these, to go back in and explore for more, to make
4 them big enough to attract customers, to gas transmission
5 customers and markets. A lot of companies can't afford to
6 sit on shut-in wells for five or six years.

7 MR. T. COTTRELL: My other question is, you mentioned
8 that the size of the Elsworth field and so on, and utilizing
9 the deep basin and decreasing the need for frontier gas.

10 MR. P. JACKSON: Yes.

11 MR. T. COTTRELL: My question is, are the interests of
12 Dome Petroleum and Canadian Hunter opposite?

13 MR. P. JACKSON: Well, okay, no, not really; they
14 are a little different, though. Let's put it this way, in
15 the frontiers, the target has always been oil. Dome is going
16 after Beaufort oil; Chevron, Gulf is going after Hibernia
17 oil, and really when PanArctic went into the Arctic Islands,
18 they were going after oil. What they found, though, is a
19 large gas reserve up there. Of course, you can't really
20 build those into the supply situation for many years. So
21 they have different aims.

22 Now when Canadian Hunter got going as a small
23 company, as I said before, they were going after gas and oil.
24 As it turned out, it seems like we are a heckuva lot better
25 at finding gas than oil. We are not doing badly with oil,
26 but we seem to have -- we have got a tremendous reserve
27 established in gas. So our interests have diverged out of



1 the past activity and performance. But our goal -- Gulf's
2 or Dome's goal would not be to go into the Beaufort, for
3 example, and find gas. In fact, it presents a problem; you
4 have to think about that; what is going to happen with gas
5 in the Beaufort and Hibernia; that will be very expensive to
6 deliver to shore. So those gas reserves are well into the
7 future; they are way down the line.

8 MR. M. MUC: Mike Muc with Pollution Study. How
9 does the industry perceive the sort of conservation movement
10 and the environmentalist? Is it a threatening movement? Is
11 it something that's going to negatively affect your
12 industrial development and resource development, or are you
13 looking at it in a positive way?

14 MR. P. JACKSON: Well, it goes company by company,
15 but I think the trend is that companies are realizing -- I
16 think I am going to have to praise you for your efforts in
17 doing this; pressure groups do have a very real function,
18 and they bring points to mind to companies that there are
19 other factors, too, not just economic factors. There is
20 preservation, social functions, et cetera, and a lot of
21 companies now, including the majors, Esso, are really taking
22 a good look at their operating practices and trying to look
23 at their recommendations being put to them, and a lot of
24 them do employ and use people who can give them information
25 on what the impact is going to be. Then we try and work
26 around it.

27 I think the proof of the pudding is when you can



1 go into an area and put in a large development and really
2 stay on good terms with the local population in that you're
3 doing as well as you can for them. You are looking after
4 their land and things like this. That really is a goal. In
5 fact, one of Canadian Hunter's goals is to fit this giant
6 development into this area with a minimum of disruption, and to
7 John Masters and Jim Gray, the president and vice president,
8 that is written in stone, and that is the reason for our
9 surface landmen out here and our people trying to adjust
10 things to the community. Anybody at Hunter who doesn't want
11 to believe that, doesn't last there very long. So this is
12 a trend in the industry, and I think it is a positive
13 attitude, yes.

14 MR. T. COTTRELL: How about negative impacts, we want
15 to hear about those.

16 MR. P. JACKSON: Okay, I guess the negative has to
17 come through overly strident emotionally-charged attacks.
18 I think it goes -- it is the normal situation when somebody
19 has a good argument and well supported and presents it in a
20 way that can be understood, it will be listened to. I think
21 the trend is that it is being listened to more and more.
22 But whenever you get the strident name-calling, whatever,
23 that immediately diffuses their arguments, it weakens their
24 arguments. So I think that is the image that a lot of
25 environmental people have to overcome, and that is an image
26 that I think is being overcome, too.

27 MR. T. SHEWCHUK: Thank you very much. On behalf of



1 all of us here, thank you for coming and speaking to us.
2 I sort of tried to let the discussion be free and easy, and
3 I'm sure if anybody has any more questions, we can buttonhole
4 you in the hallway, and I think we should break for lunch
5 now. Thank you very much.

6 (LUNCHEON ADJOURNMENT)

7 DR. M. KOSTUCH: I'd like to welcome you all here to
8 the ECA luncheon where we have the honour of listening to
9 our Executive Director. We both survived the year and
10 managed to survive some tough times, but I think overall, it
11 has been a good year. There was one thing I would like to
12 have Alistair address during his talk, so I'm going to
13 comment on it now. The ECA held an excellent public
14 participation workshop in March, a super workshop. They had
15 some excellent people come from various government
16 departments, from your own organization, and those people
17 made some very constructive criticisms, options that the ECA
18 could look at, things that they could do to improve the
19 effectiveness of the ECA.

20 I was disappointed by the ECA's response, and I
21 would like the ECA to reconsider their response to those
22 recommendations. That is one of the things Alistair can
23 address in his talk.

24 Alistair comes to us from B.C., originally; he
25 received his training at the U.B.C. in geography and
26 economics. He has had a wide background in many of the
27 things we have been discussing here at this conference.



1 He has been a research planner, he has been a director of
2 long-range planning for the City of Toronto, and an
3 economist in Ottawa.

4 He came to us in 1977 as your Executive Director,
5 and since that time, he has been the Vice Chairman of the
6 panels for public hearings on environmental effects of
7 forestry operations, on the management of water resources
8 in the Oldman River basin, on the hazardous waste
9 management, and on noise. I think that is a wide variety of
10 topics and should give him a lot of things to talk about,
11 on a wide variety of knowledge; it must be very rewarding to
12 sit on those things and hear all of the comments that the
13 public of Alberta have to make. Alistair, would you please
14 address us.

15 MR. A. CRERAR: Thank you very much, Martha, and it
16 just is lucky, I guess, that I had in fact included
17 something addressing the kind of questions that you have put
18 to me. It was not a put-up job. One thing you know about
19 Martha is that it is never a put-up job. So if I do touch
20 on your question, it is because in fact it has been on my
21 mind. And in fact, there were three questions from the
22 meeting planning committee and those were what were my
23 concerns prior to the internal examination, the public
24 participation workshop, that Martha referred to.

25 The second question was what are the next major
26 areas of hearings, and the third is what is going on within
27 the ECA.



1 Now, I'm going to address all three of these
2 questions, and a little bit more in fact. I will try and
3 keep it as short as I can so that you can in fact ask
4 questions.

5 My first question is what are the concerns prior to
6 the internal examination, and my response to this is that I
7 think that every organization should have a periodic
8 re-examination. Not every year, and I don't know how many
9 years you should go by without doing this, it's sort of like
10 dragging up the plant to see whether it's growing or not, but
11 a periodic examination is something I would suggest for any
12 organization, and particularly government organizations, and
13 I don't know how many of them do it; I don't in fact know of
14 anybody else that has done it.

15 My second concern was with the viability of council
16 and of PAC. Are our successes sufficient, and are we
17 worthwhile, and flowing out of that, I guess, is another
18 thing, can we do better. If there are deficiencies, can
19 they be rectified. So those were my concerns prior to it,
20 and I think what came from it for me is that we are viable.
21 We do contribute. Sometimes it is hard to identify this
22 precise contribution or the extent, and I will return to
23 this during the course of my speech.

24 Now, to follow this up, we are changing in response
25 to that session that we had. One thing, I think, that was
26 identified that was not identified then was that we need to
27 provide more support to Public Advisory Committees. I have



1 resisted, or not tried to not interfere until we built up a
2 kind of a rapport, a bond of trust. I think you now realize
3 that I don't want to run you, but I want to support you, and
4 I am looking for ways in which to provide additional support
5 without running you.

6 I want your ideas, I want your advice, all of the
7 things that you can contribute, but perhaps we can find a
8 way, in fact we are moving towards finding a way, of providing
9 greater assistance to improve the way in which you deliver
10 the services that you render.

11 I have asked for three additional staff people in
12 the budget for the next physical year starting in March 1982,
13 one additional person in the liaison group to help Bill and
14 Betty and Eileen and Joyce to provide the service to you
15 people at the level that you have become accustomed to, and
16 to tell you that you have become accustomed to one of the
17 highest levels of service that anybody in any organization
18 could experience. I think you are very well served by the
19 group that we have, and I am trying to maintain that because,
20 in fact, it is a reciprocal thing. We provide, I think, good
21 service to you; you also provide enthusiasm, more people,
22 more meetings, more arrangements to be made, more minutes
23 to get out, more this, more that, more other things. That
24 is wonderful, that is what we want to do, but of course it
25 creates a requirement for more people to help.

26 In addition, we are going to have two additional
27 research officers, a team of research officers one and



1 research officers two. In a large part this is to respond to
2 the kind of needs that seem to be appearing, requests from
3 different study groups for assistance in researching a
4 particular question, like Mike Kelly working with the
5 Environmental Education Committee. I think there was a little
6 bit of help this year in reviewing resolutions. Again, they
7 are your resolutions, but if research can help and strengthen
8 the background and various other things, I think we should
9 be providing it.

10 However, remember the two research officers are
11 not dedicated to PAC. We are, in our research group, trying
12 to develop a very wide range of skills, people with
13 different backgrounds who we don't use them exclusively in
14 their background, because we don't want specialists, but we
15 like to have people that have different life skills and
16 technical skills so that we can insert them into a particular
17 problem that is most appropriate.

18 So when your requests come to us, we will be able
19 to respond in a better way. If it happens to be, for example,
20 on noise, it would probably be Tom Cottrell that would be
21 planning to help you. If it were some problem on water
22 management, it would be John Lilley that would help you, and
23 so forth through the staff people, depending on what they
24 know and what they can contribute. Dave Buchwald is here,
25 and it is his responsibility to try and match the staff
26 resources with the requests. He is the fellow that has to
27 put together all these different things because of a series



1 of other requests that are coming out of our, for example,
2 responses to public hearings and various other things,
3 policy review. He will have to do the judging between your
4 request and the staff, but we will have more capability to
5 respond to you.

6 The next major area of hearings, you were asking
7 about that, or at least Planning Committee was, it is no
8 secret I guess that we have been preparing for security of
9 the agricultural land base for some time. We are looking to
10 the approval of our terms of reference by Order in Council
11 soon. I don't know when, but it should be soon. It could
12 be this week, it could be next week, it could be early in
13 January; I hope it is early in January because we have
14 something of the order of ten plus or minus publications
15 which are either in editing and about to go to the printers
16 or at the printers. So we have a developing background of
17 material that we should be -- we will shortly be in a
18 position to release along with a film which was, for example,
19 supposed to be ready last week, but got held up for one
20 reason or another. But again, it is one of these things
21 where it should be here within the next week or so.

22 In this concern of looking at security of
23 agricultural land base, there are two major thrusts. We are
24 looking at urban development as a way in which agricultural
25 land moves out. We discussed it a lot this morning. And
26 urban development includes all kinds of things like
27 annexations, country residential, linear development, the



1 roads and transmission lines, industrial developments,
2 resource developments, and land prices and their impact on
3 agriculture. Because the land prices are influenced by
4 expectations for new development. On the other side, that is
5 one major threat, thrust, whatever you want to call it, and
6 we have been able to identify more precisely than it ever has
7 been done before, the material that we have done as
8 background, research, just exactly what is the extent of
9 these things. So the people know these figures are accurate,
10 and you have a very good idea of what the potential impact
11 of this particular set of developments is likely to be.

12 On the other side, there are agricultural impacts,
13 the things that are threatening the security of the
14 agricultural land base that originate back out on the rural
15 base. Things like salinization, loss of nitrogen in
16 organic matter, summer fallow, summer fallow because of its
17 application in salinization and loss of nitrogen in organic
18 matter. Acidification we have talked about at this
19 conference, and that has alerted us to a problem.

20 We had this soil science workshop in February,
21 which we sponsored, and we found that the expectations of
22 soil scientists was that by 1985 in Alberta we would have
23 1.5 million acres with a PH less than 5.5, of which 685,000
24 acres would be in the Peace River. So it is a big problem
25 here, but it is not exclusively here.

26 In 1985 as well with the PH between 5.6 and 6.0,
27 there will be 3.8 million acres in Alberta, 1.4 million acres



1 in the Peace, that is a major problem.

2 What the soil scientists tell us is that somewhere
3 between 60 and 70 percent of this is due to the practice of
4 nitrogen -- applying nitrogen fertilizers to the soil. The
5 remainder, between 30 and 40 percent, is from acidification
6 from the atmosphere.

7 Again, the kind of thing we are looking at in the
8 rural areas, erosion, wind and water erosion. We learned
9 in the '30's how to adjust to these problems - strip farming,
10 trash cover, windbreaks, all of these things, but we have
11 forgotten them because we haven't had that kind of
12 recurring drought situation for what is now going on for 50
13 years, 40 years. That is a generation that has gone by, a
14 generation that learned, and a generation that has
15 forgotten.

16 We are putting in bigger machinery, being impelled
17 by the economics of farming, bigger fields; we are taking
18 out the windbreaks; the speed of the machines is increasing.
19 We had a reminder in the spring of 1981 of what drought
20 conditions can do. If any of you have noticed the level of
21 snow that there is in Peace River at the moment, we may be
22 having another dry year, another dry spring. You can never
23 tell with these things, but right now one has to worry a
24 little.

25 Then the last question really is what are the
26 chances to expand the agricultural base. You know, people
27 say that the solution is in the north or the south,



1 irrigation in the south or the northern frontier. We again
2 have pretty accurate figures, or at least from Pettapiece
3 and Lindsay the soil science people, they tell us that there
4 are 13.3 million acres of Class 1 to 4 land in the Peace
5 River, and that goes all the way up to the northern border
6 with the Yukon or the Northwest Territories. Of that 13.3
7 million acres, 5 million are Classes 2 and 3; there are no
8 Class 1 lands by CLI classification in the Peace River.
9 Class 2 and 3 are good lands, about 5 million acres. There
10 is 8.3 million acres of Class 4, and that sounds, you know,
11 between the two of them, that is quite a bit. But in 1976,
12 the occupied farm land, that was five years ago, already
13 occupied 7.86 million acres.

14 If those people were at all wise, they would
15 probably have located on Class 2 and 3 land. So what
16 remains is probably Class 4. In fact, there is, it seems,
17 around 5 million acres of additional land almost all
18 probably Class 4.

19 Now, we are preparing something like 15 bulletins
20 dealing with all of these different aspects, and I have just
21 touched on a few. It is a very complex field. We have
22 touched some of the complexities this morning when Martha
23 was suggesting some of the options that we had. Those are
24 only some of the options, and you can see that each one of
25 those options has problems in one direction or another.

26 I said that about ten reports are at the printer
27 for editing, and I hope that we will be able to launch our



1 information program in mid-January, after Christmas break
2 sort of thing.

3 Now what is going on within the ECA at present.
4 Some of it I have mentioned, such as agriculture and staff
5 additions. In addition, probably most of you are aware of
6 it, but I will repeat, the contract has gone out to
7 Allistair Lucas who are doing the comparative
8 study of environmental regulation standards and approaches
9 in Alberta, B.C., Saskatchewan, Ontario, with the federal
10 government and the U.S.A. for air, water and land, and land
11 in terms of reclamation. This is part of a renewed emphasis
12 on policy review which was one of the things we picked up at
13 the public participation meeting.

14 One other thing I would like to mention is the
15 move. We had currently about 12 months to go on our lease
16 of space at College Plaza where we are now. We are perfectly
17 happy with this space, happy with the location, however, we
18 happen to share that building with the Department of Public
19 Works, Provincial Department of Public Works, they are our
20 landowners, and they are expanding in line with the
21 expansion of the provincial public service. They have an
22 eye on our space; it is a nice space, right up on top and
23 all kinds of good things about it. So in a sense it is
24 either jump or be shoved. So we looked all over the south
25 side, and the best thing we could find, there are problems
26 with it, is in a place called the Webber Centre, 5555
27 Calgary Trail; should be easy to remember. It is on the 8th



1 floor, excellent space, certainly more convenient for those
2 who are coming in from the south, west or east, because there
3 is an east-west connection as well, but not as convenient for
4 those from the north. When do we move? The blueprints have
5 been signed, I think that they have been presented to Public
6 Works with our approval and all the things, the design
7 working papers are being developed, and it might go out to
8 tender next week. There is somebody, when I mentioned this
9 to them, they said you will be in there by June, but I said,
10 remember, it's the Department of Public Works that wants our
11 space, so they are going to move faster than they normally
12 do. Maybe they will have the place ready by the middle of
13 February, perhaps. I wouldn't like to give a time. That is
14 about the earliest possible time and they may meet it.

15 Okay, let's go back and talk about what influence
16 we have had. Forestry, we have now had the final response
17 to each of the recommendations from the Minister, Mr. Leitch,
18 the Minister of Energy and Natural Resources. Of the 140
19 recommendations, 15 were rejected. There are another 10
20 where it is awfully hard to tell whether they are rejected
21 or not. Anyway, it is something around 90 percent
22 acceptance rate, and that's pretty good. With the Oldman ,
23 again total rejection, however, to what extent was the
24 caution in the approach to the interbasin transfer that has
25 been exhibited recently a result of the knowledge that even
26 in the south expansion of irrigation to the physical limits
27 of water availability is economically doubtful and



1 environmentally harmful; I don't know.

2 One thing I do know, and I don't think we are
3 paranoid, I don't think it is unreasonable to ask what the
4 demand for water in the north will be and in the south I
5 don't think it is unreasonable to ask that the chemical,
6 physical and biological consequences of transfer be fully
7 identified, that the costs, not just capital but operating
8 costs, because we're moving water uphill when we go from
9 north to south, be established. I think it is a testimony
10 to democracy and the vindication of our system that in spite
11 of the Premier's enthusiastic support of water transfer, that
12 somewhere in the Planning and Priorities Committee what I
13 would consider wiser heads prevailed, and what came out of it
14 was a decision to look at drainage in the north and look at
15 capacity for irrigation in the south, and that is a real
16 plus. Somebody has got the message from somewhere, somehow,
17 that we should look before leaping, that this is a very big
18 decision; very, very real plus.

19 However, in that whole background that, you know,
20 all those documents that came floating out into the open,
21 memos, confidential material stamped secret all over it and
22 so forth and so on, the most distressing revelation to me was
23 a memo from Peter Melnychuk to Mr. Kroeger, the Minister of
24 Transport, and I would like to just quote from that. This
25 is Peter Melnychuk's memo to Mr. Kroeger; he was providing
26 him with background before he went down to Red Deer to
27 address a conference on water management there.



1 "In conclusion, present policy does not
2 preclude interbasin transfer but does
3 emphasize using existing supplies first.
4 Further to this, it should be noted that
5 any dams and any reservoirs being planned
6 and built now such as the Dixon Dam on the
7 Red Deer River, are being located such that
8 they will 'fit,' be effective and serve as
9 part of the eventual concept of interbasin
10 transfers of water."

11 That is from Hansard.

12 Now, I wasn't here for the Red Deer Dam, but I
13 received the impression, and I think the last substantive
14 comments by Bob Clark before he retired, and Bob Clark was a
15 stout fighter for the environment and one that we will miss,
16 is that Dixon Dam was not located to fit in with the future
17 interbasin transfer. When we tried to pin down to see if
18 anybody clearly stated that it wasn't there for that purpose,
19 we couldn't really find reference. I had Bill look over
20 some of the transcripts from the Red Deer hearing; nobody had
21 actually specifically come out and said that. So this is
22 pretty clear.

23 I don't think it helps establish trust at the level
24 that needs it most, not so much at the Minister's level as
25 at the senior technician's level. They go on year after
26 year, Minister after Minister.

27 Well, I reported earlier about hazardous wastes
yesterday. What has PAC accomplished? A great deal. Never
as much as you want, and I hope you never do, because you
would stop wanting, but remember acid rain, the submission of
PAC to the federal subcommittee endorsed, and in fact Martha



1 was telling me that she was down at the Tepee Creek ERCB,
2 and they spent a day trying to get her to admit that it
3 shouldn't apply to sour gas plants. When people from those
4 kinds of occupations think it's worthwhile spending a day
5 trying to get away from the application of that particular
6 thing, it probably means it's been reasonable, it's been
7 endorsed, it becomes something that I think a lot of people
8 will agree with, and an idea developed here gets more and
9 more acceptance. That means a great power for good in this
10 province.

11 Air pollution - Pincher Creek. The very real
12 problems that they have down there are being investigated
13 by the Canadian Public Health Association, and looking at
14 the background of the medical team that has been assembled
15 for that, I don't think they could have done much better.
16 A lot of that has been due to pressure from PAC, pressure
17 from ourselves, something has resulted.

18 In addition, the type of equipment that is here in
19 this province on trial - Fort Saskatchewan is being
20 monitored - you know, Environmental Pollution deserves
21 congratulations for assistance, for identification of
22 reasonable, defensible objectives and pushing them and
23 pushing them and pushing them; it's good, you get things
24 done that way.

25 Grazing reserves, I think the quality of planning
26 has improved for all grazing reserves as a result of the
27 pressure by PAC on the Blackfoot and Rocky Mountain House,



1 a number of places. It has lifted the quality. I can't
2 prove the connection, but the connection is there. It is
3 like trying to prove that the stuff that comes out of the
4 stack here comes down as acid rain over there. The
5 connection between these two is not provable in that kind of
6 sense, but circumstantial evidence is certainly very high.

7 Then looking at SAC, for example, black fly control
8 the control of black flies in the Athabaska River was
9 reviewed by Dr. Boag, passed his comments on to PAC and SAC;
10 SAC reviewed the report and Dr. Boag's comments, found
11 deficiencies and endorsed Dr. Boag's view that the report be
12 submitted to objective, expert evaluation, and it has very
13 promptly and it is going to the National Research Council,
14 and that is going to be another plus.

15 I believe you have had good receptions from your
16 meetings with other Ministers. I think that in these
17 meetings they find that you are not seven feet tall with
18 horns and bite, in spite of Martha, that you are reasonable,
19 that you are concerned, that you are not trying to score
20 political points, that what you want to do is to protect
21 the environment, and that is our greatest strength, that is
22 our only strength. We don't want status, or notoriety to
23 put down anyone, to hound anyone, but to have an environment
24 in Alberta that we can use fully, enjoy fully and be proud
25 of. I will end with a quote from Pogo, my favourite
26 philosopher: "Good always wins because it's nicer."

27 Thank you very much.



1 DR. M. KOSTUCH: Are there any questions? You must have
2 done an awful good job.

3 MR. A. CRERAR: It's the first time I have left them
4 speechless.

5 MR. C. WOOD: Alistair, good and nice reminded me
6 of Leo Durocher, and I'm sure you know what I'm going to say;
7 the fact is, that is the other end of the scale. Do you
8 think there is a problem there, as well?

9 MR. A. CRERAR: That we are too good or too nice?

10 MR. C. WOOD: No, that nice guys finish last.

11 DR. M. KOSTUCH: I don't think we have to worry
12 about that.

13 MR. A. CRERAR: There you have your answer. You
14 know what I'm really trying to tell you is that if you're
15 trying to score points, if you're trying to put people down,
16 all of these things really don't do very much good in moving
17 things along in the direction we want to go. But it is
18 really, what is your definition of "nice" or "good"? To
19 me, good means persistent, to keep on hammering at something,
20 bringing it forward, showing that you really care about it.
21 Some people would say that's not nice; that's nice to me.

22 DR. M. KOSTUCH: Any other questions?

23 DR. G. GRIFFITHS: It is extremely difficult to
24 discover new buildings along the Calgary Trail since none of
25 them have numbers, and I wonder if a map could be put out.

26 MR. A. CRERAR: Yes, well I think most of the
27 patrons on the Riviera would know where you were at. No,



1 that's not nice. Yes, we'll put a map out. It is really
2 not hard to find, but it is awfully hard to get into in the
3 sense that you don't get off it in the usual way. Sure, we
4 will make a map.

5 DR. M. KOSTUCH: That is a technical problem that we
6 will take care of.

7 DR. T. VEEMAN: Alistair, do you see any role for
8 the ECA or PAC in terms of this siting of plants? I'm sure
9 we are going to be bound up with maybe criticizing the
10 eventual site, but it is going to be quite crucial for this
11 group to convince everyone that a site is needed, and do you
12 see any role for you or us in convincing the public that this
13 is of the utmost priority even though no single community
14 wants it?

15 MR. A. CRERAR: We are on the horns of a dilemma
16 there that we know that a facility is needed, we all do, we
17 all are aware, we can't just have 200,000 tons of stuff
18 floating around in this environment; this isn't good for you.
19 But this question of where it should go is a very, very
20 crucial and difficult one. I'm sure there will be occasions
21 we will have to keep the pressure on for getting some kind
22 of solution. It may be that for some reason or other we
23 find whatever solution they come up with as being ineffective
24 or could be improved or something like that. I would hope
25 that they will do a good job, that we are longing, I think,
26 to be supportive to them. We would like to be supportive
27 to them. It would be just -- it should be possible that our



1 interests and the interests of the Department of the
2 Environment coincide completely about this thing, and I
3 don't see any reason why we shouldn't be marching step in
4 step and supporting each other.

5 DR. M. KOSTUCH: I'm going to ask a question.
6 Apparently, the Cabinet has voted against, apparently,
7 against interbasin transfer, but it is obvious that the dams
8 are being built where they are appropriate for interbasin
9 transfer. We certainly didn't need Melnychuk's memo to tell
10 us that, all we have to do is look at the map. Would you
11 advise PAC and SAC to give some positive direction into what
12 the water management in this province should be?

13 MR. A. CRERAR: Yes, I think water management is
14 a major concern and a continuing concern. You know, that is
15 our major problem in environmental matters. There is only
16 so many of us, there is only so much enthusiasm, there is
17 only so much time, and we have to ration it out to where it
18 is going to do the most good. I know you have already
19 identified that air pollution is going to be the top
20 priority next year --

21 DR. M. KOSTUCH: One of the six.

22 MR. A. CRERAR: Maybe number two.

23 DR. M. KOSTUCH: No, we haven't prioritized it.

24 MR. A. CRERAR: I think water management, we should
25 certainly continue looking at because it is an important
26 element. One of the things that partly will come out
27 through the agricultural hearings, one of the things is what



1 about drainage, what are the impacts of drainage in fairly
2 substantial scale. There's a sort of a law of conservation
3 of energy or something like that where if you take something
4 away from something and you add it to somewhere else, and
5 if what you take away from here is added somewhere else
6 where it is going to be a problem, a different kind of a
7 problem, maybe a different time scale problem or something
8 like this, that is certainly something to be looking at.

9 DR. M. KOSTUCH: Thank you. One last question, Mike.

10 MR. M. MUC: How do you resolve the issue of
11 getting more foot soldiers? I think we have got great
12 officers here and we are playing war games and planning
13 strategy, but it is the public, the foot soldiers out there,
14 that are battling out there and supporting the issues. The
15 various public hearings have shown a tremendous response by
16 the public. How do you see developing that? Do the officers
17 go out and do the recruiting? Does the Environment Council
18 do the recruiting? How do you develop that resource that I
19 think is essential if the Environment Council is to move
20 into the future as a major sort of element in the government
21 and our society?

22 MR. A. CRERAR: Yes, there is several ways of doing
23 this, and I think some of them are already being applied and
24 quite successfully. I think opening up the study groups to
25 the media. Now, some of the most interesting topics of
26 study groups are ones which end up on Page 32 right opposite
27 the real estate ads or something like that. At least to me,



1 my evaluation of what news is is different from theirs. But
2 nevertheless, we provide the opportunity for them to become
3 aware of and report on to the public the kinds of matters
4 that concern the different study groups, and this is good.
5 It first of all airs and identifies a problem. It also
6 provides an idea that the Environment Council and its
7 Public Advisory Committees are concerned about these matters,
8 because at least they are hearing about them. So that is
9 certainly one route.

10 I think there are alternative methods of contacting
11 into the public, part of which we hope to build around the
12 public hearings. If the public hearings are chosen to
13 actually tackle problems that are important problems, such as
14 I think the security of agricultural land base is, we can use
15 that to build a bridge and develop support both for that
16 particular one and in a general diffuse way to the whole idea
17 of the council.

18 Those are two that come to mind to give you an
19 answer that doesn't run on more than half an hour.

20 DR. M. KOSTUCH: If you have any other questions, I
21 would like you to catch Alistair after. I would like to ask
22 Bill Batycky to come up to give our appreciation to Mr.
23 Crerar.

24 MR. BILL BATYCKY: I notice that we are just about out
25 of time. One comment before I give thanks. I think it is
26 probably time that the Environment Council of Alberta can
27 officially become that; I notice some of their packages of



1 information and so on has Environment Conservation Authority
2 on it, so I think it has probably been born and you are out
3 there now.

4 Ladies and gentlemen, it is my pleasure on behalf
5 of you to thank Mr. Crerar for first of all taking us to
6 lunch this time and the many other times that he has done it.
7 Secondly, for giving us the promises of a more supportive
8 environment for PAC, and giving us the recognition necessary
9 to facilitate a feeling of self-worth on the time and effort
10 given unselfishly.

11 Thirdly, for the many hours that he and his staff
12 devote annually and plan to devote for the preservation of
13 the environment and its resources for future generations.
14 They stand as an excellent example that being environmentally
15 concerned is sound citizenship. I invite all of you to join
16 with me in thanking Mr. Crerar, and extending our thanks to
17 and through him to his staff.

18 (APPLAUSE)

19 DR. M. KOSTUCH: Excellent; thank you.

20 All through the day your study group chairmen have
21 been telling you how good a job the secretariat has done.
22 She has really made life a lot easier for us. We don't have
23 to do the -- one advantage we have over other environmental
24 groups is not having to take care of the day to day
25 necessities of sending out minutes and making phone calls
26 and arranging meeting rooms which ties up so much time for
27 many environmental groups. PAC has an advantage in having



1 a staff that can do the work for us, and Betty certainly does
2 a good job for us. At this time, I would like to present
3 this on behalf of PAC to Betty.

4 MZ. BETTY MEIER: Do I have to open it first, or can
5 I thank everybody first?

6 I would like to thank everybody on the Public
7 Advisory Committee; I consider you my friends. I work with
8 the most wonderful bunch of people in the world, Mr. Crerar;
9 Bill, who supports me so tremendously; my past secretary,
10 Elaine; my present secretary, Joyce; all the research
11 officers. There was never anybody as lucky as I to have the
12 job that I have got. Thank you.

13 (APPLAUSE)

14 MRS. B. HUNTER: The next bit of housekeeping for
15 the organization, and that begins with the report from the
16 Nominations Committee of which I was chairman, with the
17 help of Chris Dunkley and Guy Swinnerton. We are proposing
18 two people for the positions, one as chairman and one as
19 vice chairman, and that is all. However, we will operate
20 under the parliamentary procedure of asking for
21 nominations from the floor. I will call for those three
22 times in succession, and if there are none, then we will
23 have a motion that the nominations cease. I will then call
24 upon the nominees to come up to the front and to give their
25 short speech, and an election will be automatic. However,
26 if there are nominations from the floor, and we need a
27 ballot nomination, the secretariat will look after ballots



1 and we'll have everybody come to the front and give their
2 election speeches.

3 Your report of your Nominations Committee is as
4 follows, and I should be saying Nominating Committee, is as
5 follows: Chairman - Ron Whistance-Smith. Vice Chairman -
6 Joe Shemanchuk. First of all for chairman, are there any
7 further nominations? Are there any further nominations?
8 For the last time, are there any further nominations?
9 (APPLAUSE)

10 Ron, could we have you come to the front, please?

11 Nominations for vice chairman, your Nominating
12 Committee has nominated Joe Shemanchuk. Are there any
13 further nominations? Are there any further nominations?
14 For the last time, are there any further nominations?

15 Joe Shemanchuk is your new vice chairman. Joe,
16 would you come up, please?

17 MR. R. WHISTANCE-SMITH: I will make it a very few words.
18 I hope, first of all, as chairman of the PAC for the coming
19 year I have one terrible set of shoes to try on, what an act
20 to try and follow. I am not seven feet tall, and I
21 certainly, if you will pardon the pun, don't have the
22 profile of Martha. But anyway, I will try my very best to
23 try and lead PAC as chairman to, I guess I don't have the
24 same gifts as Martha, but those I do have I will put in your
25 service and try and do my very best for you. Martha, I must
26 say in tribute now, has gone so far as to actually help us
27 map out our program for the coming year, and I think that



1 takes a terrible burden off my shoulders, and it is something
2 I will have to try and render as the year goes along to try
3 and encourage PAC during the coming year to formulate what
4 it is going to do in the year following, a forum of planning
5 that doesn't hurt anybody at all.

6 Thank you very much for your confidence and as I
7 say, I will try my very best.

8 MR. J. SHEMANCHUK: Chairman of the Nominating Committee,
9 ladies and gentlemen, well, I am going to have probably fewer
10 words than Ron did. I would first like to thank the
11 Nominating Committee for expressing the confidence in me that
12 I could handle the chair of vice chairman. This will remain
13 to be seen. I will not be giving you any particulars of what
14 my qualifications or experiences are, because if I do that,
15 I will then be classed as an expert, and that is certainly
16 -- will subtract from the purpose of PAC which is
17 representative of the public.

18 I accept the job as a challenge, and I am prepared
19 to put in an effort and I do hope that the cooperative spirit
20 from all you members will be maintained as it has in the past,
21 and the net result of our success will show up next year.
22 Thank you very much.

23 MRS. B. HUNTER: Thank you, gentlemen. As the first
24 chairman of PAC on the distaff side, followed by another one
25 of the same sex, I think we have prepared things, Martha and
26 I, to hand them safely over to you two gentlemen. Thank
27 you.



1 DR. M. KOSTUCH: Back on to the reports, we have
2 the report from the Non-Renewable Resource Study Group,
3 Chris Dunkley.

4 REPORT OF THE NON-RENEWABLE RESOURCES STUDY GROUP MOVED BY
5 CHRIS DUNKLEY AND SECONDED BY BETTY HUNTER.

6 DR. M. KOSTUCH: Is there any discussion or
7 questions? If not, I will call the question. All those in
8 favour of accepting the report of the Non-Renewable
9 Resources Study Group?

10 (SHOW OF HANDS)

11 Opposed?

12 (MOTION CARRIED)

13 We now have the Urban Study Group report; Steve,
14 would you give your report, please? I don't see Steve; he
15 said he was going to have lunch with a friend, so I suspect
16 he is not back. We will have to catch Steve later.

17 I will go on with my report, then.

18 REPORT OF THE COORDINATING COMMITTEE OF THE PUBLIC ADVISORY
19 COMMITTEE MOVED BY DR. M. KOSTUCH AND SECONDED BY MR. R.
20 RICHARDSON.

21 MR. R. WHISTANCE-SMITH: Is there any questions or
22 discussion?

23 DR. G. GRIFFITHS: One minor editorial point. The
24 report, the indentation of the list of membership at the
25 head of the report gives the impression that the Science
26 Advisory Committee and the Environmental Education Advisory
27 Committee are study groups of PAC, so when this is printed,



1 the layout should be changed to alter this impression.

2 MR. R. WHISTANCE-SMITH: Point well taken. Any other
3 questions? If not, I will call the question. All in favour
4 of adopting this report?

5 (SHOW OF HANDS)

6 Opposed?

7 (MOTION CARRIED)

8 DR. M. KOSTUCH: That concludes the committee
9 reports, and now we will get on to the restructuring of PAC.
10 Bob.

11 MR. R. RICHARDSON: Good afternoon, ladies and
12 gentlemen. I understand I got this job because no one else
13 has the courage to do it, and I wasn't at the meeting. At
14 any rate, this whole subject of restructuring the study
15 groups came about mainly because the Coordinating Committee
16 perceived several problems with the present study group
17 structure in that the division of areas of interest between
18 groups has become somewhat fuzzy, and the same problems are
19 being addressed by more than one study group, albeit from
20 slightly different angles, while other areas of concern are
21 not necessarily being addressed. The second concern was a
22 lack of interest and low attendance at some study group
23 meetings.

24 The third concern was the fact that some groups
25 just had too much on their platter, and others are more or
26 less searching for issues. There have been several times
27 when the Coordinating Committee has given more problems to



1 one group than they wanted to, but they basically belonged
2 in their area, and this causes disruptions of the group's
3 plans as well.

4 The Coordinating Committee also felt that since
5 this present organization has been with PAC since its
6 inception, that since areas of concern are always changing,
7 that it is time that we took a good look at the study group
8 structure. We felt that if PAC is going to continue to
9 fulfill its mandate and to address these areas of concern,
10 that the structure of PAC must change or at least the areas
11 of concern must change in order to meet the challenge of the
12 '80's, because things are continually changing, and I think
13 we have got to change with them.

14 In order to address this problem, the Coordinating
15 Committee went through an extensive planning process because
16 we felt that the Coordinating Committee has been spending
17 far too much time in putting out fires, concentrating on
18 immediate problems and neglecting long-term planning, which
19 is essential. Because if you do not have a long-term plan,
20 then your study group programs, you have nothing to fit them
21 into. We are still going to have to react to these fire
22 situations, but a long-term plan is necessary if we are
23 going to be effective.

24 So we went through a long planning process of
25 several meetings with the help of Les Cook acting as a
26 facilitator to determine just what are the areas of concern
27 that we can foresee. Actually, the issues that we could



1 foresee coming up in the next two or three years.

2 Once we developed these issues, we brought them
3 together into areas of concerns which we happen to be able
4 to match pretty well with a number of study groups we have
5 got, by design of course, but these are the items we think,
6 the areas of concern that should be attacked in the next two
7 or three years, and these will give us a good basis for
8 planning of study groups' work.

9 The areas of concern were identified or have been
10 circulated to all of you members; I am sure you have all
11 seen them. There was a questionnaire with them which you
12 were asked to reply to with your comments, and what study
13 group you would like to be on if restructuring went ahead,
14 and we got various, a whole bunch of different comments
15 back; some for, some against. So it was decided that this
16 should be brought up at the annual meeting and thoroughly
17 discussed.

18 We feel that in order to remain effective, we have
19 got to attack these areas of concern. Just how we want to
20 do it is another thing.

21 To refresh your memories on just what we have, Ken
22 Nelson made up a viewgraph for us, and the first one shows
23 us exactly what we have at the present time. Ken, would you
24 put that on for us, please? The rest of it is more or less
25 superfluous; if you look at the bottom line, that is your
26 present study groups.

27 The six study groups are shown there, and we are



1 going to just take that off for a minute and show you six
2 blanks there. We will fill these in with the areas of
3 concern that we developed. That is the same six, only we
4 just removed the study group names. If we could put the
5 overlay on showing the problem or the areas of concern.

6 I can read them to you: Energy, land use, waste
7 management, air pollution, water management, and urban. Those
8 are the six areas of concern that came out of the planning
9 sessions.

10 MR. T. COTTRELL: Excuse me. When you talk about land
11 use, are you specific to agricultural land use, or land use
12 in general?

13 MR. R. RICHARDSON: Land use in general.

14 MR. T. COTTRELL: You seem to have a major issue that
15 has been identified about the preservation of agricultural
16 land, and it is not specifically addressed at any of those
17 topics.

18 MR. R. RICHARDSON: No, but it is addressed under land
19 use.

20 Now, in that letter that you have got, the
21 proposal was that we would change the study group names to
22 fit in with those areas of concern. Now, the Coordinating
23 Committee would like to hear your views. I believe Martha
24 would like to start this out, so we'll call on Martha.

25 DR. M. KOSTUCH: Just to make it legal, I would like
26 to put a motion before the floor so we can have a
27 discussion, and I would like to move that the Public



1 Advisory Committee have the following study groups in 1982:
2 Air Quality, Energy, Land Use, Waste Management, Water
3 Management, and Urban Environment. The only change from
4 that is changing the Air Pollution to Air Quality at the
5 suggestion of some of the responses to the survey. I so
6 move.

7 MR. R. RICHARDSON: Do we have a seconder?

8 DR. G. GRIFFITHS: Second.

9 DR. M. KOSTUCH: I would like to speak to the motion.
10 Bob has covered fairly well the history of this; I think one
11 of the questions raised is very important, and I think
12 regardless of whether we stay with our present study group
13 structure, go to this study group structure, or some
14 modification of or something in between the two, I think
15 planning is very important, and I think regardless of
16 whatever we do, we have to, within the identified study groups,
17 do planning. We have to identify what these things are very
18 generally, just as our existing study groups are, and each
19 of those study groups has to plan what activities they are
20 going to look at. Our existing ones are the same way:
21 Pollution, Non-Renewable are very broad topics, and within
22 those we have to plan what activities we are going to look
23 at.

24 We need to have the input into policy decisions;
25 we need to have positive input into legislation. Right now
26 it is very difficult for us to do that because we are looking
27 at so many different issues and spending so much of our time



1 fighting fires. I think the best way to do that is to
2 organize around the issues, but I am certainly willing, if
3 there is a lot of problems with that, to accept some other
4 alternative. Our theme for this conference is options for
5 the future, and I think this is one of the options. I think
6 we are volunteers and we need to be as effective as we can.
7 So I hope that that is what people will keep in mind. Thank
8 you.

9 MR. R. RICHARDSON: Just before we start the
10 discussion, I think in order to give everyone a chance to
11 talk, we will ask you to please limit your contribution to
12 once per person. Mike.

13 MR. M. MUC: Mr. Chairman, is this just
14 coincidence that we have six and there was six study groups?
15 Will it vary from year to year? Next year there might be
16 two, in another year there might be eight, or is it always
17 going to be kept to half a dozen?

18 DR. M. KOSTUCH: It was coincidence that it was;
19 that was the major issues that were identified by the
20 Coordinating Committee. It could have been five or seven.

21 MR. M. MUC: So it will grow?

22 DR. M. KOSTUCH: It will depend on the wishes of the
23 groups. We are allowed to have as many study groups as
24 necessary to be effective.

25 MR. R. RICHARDSON: I would think we would always have
26 to have a fair number, certainly more than two, in order to
27 address the various issues. Because one of the problems



1 today is that one or two of the study groups just have too
2 much. Do you have a comment, Chris?

3 MR. C. DUNKLEY: Yes, Bob. I am going to be very
4 frank here; I think Martha already knows that I am not in
5 favour of changing the names of the study groups. I feel
6 that the Public Advisory Committee as a group is acquainted
7 with the existing names, and that nothing of substance would
8 be gained by changing the names. I'm completely in accord
9 with identifying these issues, I think that's great, but I
10 think those issues could be assigned to the existing study
11 groups just as well as upsetting the whole thing by changing
12 the names. I can not see that anything worthwhile would be
13 accomplished by changing the existing names of our study
14 groups. So I think that in essence is the way I feel. So
15 I am for no change in the existing names of the study groups,
16 but I am quite happy to see all these issues that are
17 identified, coordinated and planned into or directed by the
18 Coordinating Committee into these various study groups.

19 MR. R. RICHARDSON: I think, Chris, that is perhaps a
20 natural reaction in that we get quite used and feel at home
21 with our present structure, and I don't think that Martha
22 or any of us are really that hung up that we have to change
23 the names of the study groups. The important thing is to
24 follow the issues.

25 MR. C. DUNKLEY: I am responding to the motion. The
26 motion was that we change the names. I am opposed to that.

27 MRS. B. HUNTER: I am opposing the motion as such,



1 too. However, I would like to support Martha, and I think
2 Chris implemented his support, too, on planning. This is
3 most necessary both at the study group level and at the
4 Coordinating Committee, and possibly I am one person to say,
5 as the past chairman of the Coordinating Committee, I think a
6 lot of fault lies with that committee. We weren't tough
7 enough; we didn't coordinate as well as we should have done.
8 I also feel that our immediate problems last year were with
9 two study groups that are not -- those problems are not
10 cured by the present motion. I would like to suggest that
11 the present six areas of concern, with which I agree
12 wholeheartedly, can be very easily fitted into our existing
13 six groups.

14 I would like to just touch on the idea that
15 possibly at sometime we would go to three groups, possibly
16 to ten. I think we have to remember that this PAC is
17 composed of over 120 volunteer organizations. Whether we
18 see any direct result from this as having political clout
19 is something that you can neither prove nor disprove, but I
20 would hate to think that we would lose or necessarily have
21 to cut down on one year, let's say, on the constituent
22 organizations. It is very important, and I think it helps
23 us when we go to government to say, look, we represent so
24 many people, because that is votes, and therefore, I would
25 hate to see us jump back and forth; that is why I like the
26 old titles or whatever you want to call them, names, for our
27 present study groups. Granted, it is broad, but it has a



1 purpose in being broad. You can fit any emergency problem
2 into any one of those groups. Can you imagine if we only
3 had three study groups and had to put 120 people into them?
4 You know, this is disregarding whether they wanted to go
5 into them or not; I think you have to be practical.

6 It is not that I am against change, but I am
7 against, and anybody who has ever known me in my political
8 life would know that I am not of that persuasion, but I am
9 against change for the sake of change. Government
10 bureaucracies do this, and so do large companies, but that
11 is just to keep so many people busy, and in a voluntary
12 organization like this one, we don't need it, and that is
13 why I am speaking against the motion.

14 MR. R. WHISTANCE-SMITH: I didn't know whether to continue
15 doing this being incoming chairman of PAC, but again, I said
16 in my acceptance speech that I wanted to thank Martha for
17 the great load she has taken off our shoulders, basically
18 by leading us through this exercise, which is that she has
19 mapped out a program for us for the coming year.

20 But in terms of restructuring, renaming the study
21 groups, I, too, would speak against the motion. I think
22 what we have, what we see here, the Energy Study Group would
23 continue, this has been continually the weak sister, so that
24 is a very interesting thing to have come out of it. This
25 is still a high-profile problem, in other words, because we
26 haven't been able to attract people even though the issues
27 are there. Another group that would not change its name is



1 the Urban Environment, and Urban Environment has at times had
2 problems, too, attracting enough people although the issues
3 are there. Many of the issues it has dealt with are Land Use
4 issues. In fact, one might go so far as to say the bulk of
5 its work, the bulk of the issues which it has dealt with,
6 have been Land Use issues, Land Use within the Urban
7 Environment. If we then set it up under this new structure
8 and then immediately deprive it of anything to do because
9 that fell into the Land Use Study Group's category.

10 Waste Management is a very valid area for study.
11 But waste management seems to fall into very nicely the
12 category of or the categories, different aspects of it, of
13 Environment Protection, Renewable Resources. Well, just
14 stop there.

15 Water Management, an excellent Renewable Resource
16 topic, and yet we would split that off and leave no room to
17 deal with other Renewable Resource issues. So that
18 basically is my reasons for opposing the motion as it stands.

19 MR. R. RICHARDSON: Any other comments?

20 MR. S. THOMPSON: I want to -- I'm not speaking
21 specifically either for or against, but I think a name
22 change is in fact a fairly minor thing. You know, you can
23 change the name of an elephant to a cow, but it still is an
24 elephant or whatever. I think from my perspective that one
25 of the biggest problems has been the coordination of issues.
26 For instance, we heard or we spent a lot of time on dealing
27 with a resolution dealing with the preservation of



1 agricultural land. Agricultural land is a Land Use -- under
2 this proposed renaming would be a Land Use issue, but it is
3 also an Urban issue; also one can go into obviously Air
4 Pollution and Energy and so on. In other words, we don't
5 live in a world that has nice neat compartments. These
6 compartments become intertwined, and I think that is one
7 thing that has bothered me since I have been a member is
8 that an issue gets identified and sent to a specific group
9 for their study or input, when in fact the Coordinating
10 Committee should say we would like these groups to look at
11 this issue to get the full range of perspective and the full
12 range of input, so that when we come forward at the annual
13 meeting with a resolution, it is looked at in a great deal
14 of depth, and is given the significance that we place on it
15 having studied it in the first place. I think it would make
16 it a bit more effective, or the background would be much
17 more complete, much more thorough, and we would perhaps have
18 less time debating semantics at the time of the resolution
19 and a little bit more time debating the merits of the
20 resolution.

21 MR. R. RICHARDSON: Fine, thank you. Anyone else?
22 Graham.

23 MR. G. NORMAN: Graham Norman with the Environmental
24 Protection Group. I personally am against changing for the
25 sake of just changing the names. I really don't see any
26 problem with the present areas we have now, with the
27 possible exception of maybe splitting the Pollution Group



1 into two, one being Air Pollution and the other being Water
2 Pollution, or Water Management. I think my observation,
3 being a member of PAC for just over a year, is that I think
4 most of the problem is with the Coordinating Committee not
5 coordinating. Our particular study group, we were sent up
6 an agenda or a year's plan, looking at ten different topics.
7 That was going along not too bad until at our September
8 meeting the Coordinating Committee threw another five at us.
9 I would rather see a study group pick three or four topics
10 and really go into them in depth, rather than having a
11 speaker or a group of speakers come in, talk to us for half
12 an hour or an hour, then have some internal discussion, and
13 then forget about the topic until it is time to write a
14 resolution on it. I would rather see areas, for example,
15 Environmental Protection might take the Rocky Mountain
16 Slopes as its main theme for the year, and then look at
17 various aspects of that.

18 I would suggest that the PAC secretariat could
19 provide the various study committees with a lot of
20 background material which could be sent out in the mail
21 prior to having guest speakers in, that a study group could
22 then spend a full meeting discussing that, then you have
23 your speakers in, and then followed by another meeting of
24 discussing it. So you are looking at a minimum of about
25 three meetings for the individual topic.

26 I think the Coordinating Committee are really
27 missing out by not coming up with written mandates or terms



1 of reference for each study group. I know I talked with
2 Martha on this, and she said that was really up to the study
3 group themselves; I don't think it is. I think it is up to
4 the Coordinating Committee to decide what areas a particular
5 study group can work under, from where to where.

6 I think also on that line that a study group, if
7 they want to get into a topic, they should through the
8 chairman go to the Coordinating Committee and ask for
9 approval to study the topic. I think one of our problems is
10 every time we see an issue comes up in the newspaper, we
11 are very quick to react; we have to put out a fire without
12 thoroughly researching whether we should spend a lot of time
13 on a particular topic or not. I would like to go on record
14 as being against the motion as it was presented.

15 MR. D. PATCHING: Doug Patching. I just wanted to
16 make a few comments relating to the motion, as well. I
17 think that the motion was a brave one, certainly; it is
18 always difficult to not only change an organization but to
19 change it in that you also make a difference to the things
20 that that organization has been called in the past and which
21 it has always been identified.

22 I also think that it is probably opening up in a
23 way a can of worms, perhaps Pandora's box, in that it is
24 pointing out the Achilles' Heel of PAC, and that is based
25 partly on the roots through which PAC has matured and grown.
26 Originally, at least as I perceived it, there was a two-way
27 reporting mechanism, people in the general public reporting



1 through PAC as a medium to the ECA, and also vice versa, from
2 the ECA through the Coordinating Committee, and ultimately
3 through PAC, and the members back to their various
4 organizations and associations. It has occurred to me that
5 perhaps one of the reasons we have such weaknesses in a
6 couple of study groups, perhaps at different times at all
7 study groups, is that there is the automatic ability for a
8 person when he joins PAC to choose which study group he wants
9 to be with. It is just like going to a party in which you
10 know very few people, you tend to gravitate immediately to
11 the people that you know, and you stay with them. There are
12 popular groups to which other people will gravitate, and I
13 suggest that, and this is off the topic a little bit, but I
14 suggest that if you wanted to strengthen all the study
15 groups that dealt with issues perhaps more efficiently, you
16 would circulate members through the various study groups.
17 And in conjunction with what Betty Hunter alluded to, if
18 there was better coordination or more acute coordination
19 from the Coordinating Committee, then you would be able to
20 have a stronger structure.

21 I agree that the structure has to be strengthened
22 in some respects, but I don't think the organization has to
23 be changed as such. I think there has to be some minor
24 changes in philosophy, and I hope that this will be
25 addressed. I don't think it is going to require -- perhaps,
26 Bill, you will have to look at the roles documents if it
27 ever came to that. But I think that different changes are



1 indicated. I think that the main changes will be cosmetic
2 only, and I think the actual re-orientation in terms of the
3 philosophy of the present functioning of the Coordinating
4 Committee and various study groups is what's required.

5 MR. R. RICHARDSON: Thank you, Doug. Next, Bill?

6 MR. BILL FLOOK: Mr. Chairman, I don't propose to
7 comment on the merits of the proposed motion, I merely wish
8 to make a few comments.

9 My views on it were offered in writing to the
10 committee several months ago, and you are well aware of them.
11 I think it would be a pity if in what appears to be a flurry
12 of fairly negative response to the resolution to the motion
13 if the true merits of what Martha has achieved in
14 identifying these issues were to go by default. These were
15 not arrived at lightly, they didn't pull out of the air,
16 they were arrived at by a long and very tedious process of
17 planning, and I think that it would be doing Martha a very
18 grave injustice indeed if we didn't pay to her the tribute
19 that she is due for having had the tenacity to stick to that
20 long and tedious process and come up with the identification
21 of a set of issues that clearly indicate the path for PAC
22 next year. I would like to go on record as having extended
23 my full and complimentary recognition to Martha for that
24 single achievement in favour of PAC.

25 (APPLAUSE)

26 MR. R. RICHARDSON: Thanks very much, Bill. Any other
27 comments? Martha, would you like to speak to the motion?



1 DR. M. KOSTUCH: As mover of the motion, I would like
2 to close the discussion. I first would like to point out
3 that this is not a name change proposal, and I am certainly
4 not in favour of the name change proposal. It is a proposal
5 to organize around the issues.

6 Secondly, I would like to point out that with the
7 survey, most of the people that responded, or the largest
8 interest was shown in the energy proposal, Energy Study
9 Group. I question the mechanism of our existing structure
10 when it is not allowing the people who are most interested
11 in a topic to be on the study group that represents that
12 topic. There is a problem. Another larger area of interest
13 would be Urban Study Group, and yet we have an Urban Study
14 Group now, but for some reason, the people that are
15 interested in that topic are not on that study group. I
16 don't think it's a name change, it is organizing around
17 those issues.

18 Energy would look at such things as coal, tar
19 sands, the gas, also at alternative energy sources such as
20 solar and conservation. So it is a change. I'm not
21 surprised by the discussion that has taken place. I was
22 quite aware, and yet I had promised that the motion would
23 come up at the annual meeting and I felt an obligation to
24 bring it up. I think that the results of this discussion
25 will be positive, so that I am happy about.

26 I think terms of reference are essential, whether
27 they come from the study groups, I like to see things come



1 from the bottom up, I don't like to see them come from the
2 top down. But regardless of the way they come, whether they
3 come from the Coordinating Committee or the study groups, I
4 think it is essential we have terms of reference for the
5 study group.

6 As far as the coordinating, the efforts of the
7 Coordinating Committee, I agree, we need stronger
8 coordination. I have hit people on the heads all year, and
9 I have come down on them. I have been trying not to hit them
10 too hard, because I realize they are volunteers and you can
11 only hit them so hard, but ask Graham and ask a few of the
12 others if I have tried to under-coordinate. But I wish Ron
13 luck in the next year in coordinating. Thank you.

14 MR. R. RICHARDSON: Thanks, Martha. Are you ready for
15 the question? All in favour?

16 UNIDENTIFIED: Read the motion back.

17 MR. R. RICHARDSON: Betty, can you read the motion?

18 DR. M. KOSTUCH: I can read it.

19 MR. R. RICHARDSON: All right, Martha, if you could
20 read the motion.

21 DR. M. KOSTUCH: I move that the Public Advisory
22 Committee have the following study groups in 1982: Air
23 Quality, Energy, Land Use, Waste Management, Water
24 Management, and Urban Environment.

25 MR. R. RICHARDSON: Thank you, Martha. All in favour?
26 (SHOW OF HANDS - 6)
27 Contrary?



1 (SHOW OF HANDS)

2 (MOTION DEFEATED)

3 I guess what the coordinating --

4 MR. BILL BATYCKY: What I would like to do as far as
5 the minutes is record the number of people that voted in
6 favour. Not the fact of voting in favour, but the fact that
7 I think it just can't be dropped as far as the organization.

8 MR. R. RICHARDSON: I agree with you, Bill.

9 MR. C. FINLAY: I would like to move another motion
10 if that is possible.

11 MR. R. RICHARDSON: Yes, certainly. Do you wish to
12 comment before he makes another motion, Graham?

13 MR. K. NELSON: There are six in favour.

14 MR. C. FINLAY: As a newcomer to PAC I have sat
15 back and listened, and I have had some concerns for many
16 years over the issues that you have raised, and I have tried
17 to stay in the woodwork, as many of you know, for many years,
18 and I finally have come forward. Anyway, I assume that the
19 work that the Coordinating Committee spent last year on
20 looking at the issues, a lot of work I understand, a lot of
21 time, they did come up with these six issues, and so with
22 that background and thought, and even those people who spoke
23 against the motion I don't think were opposed to these ideas,
24 I propose that, this is the motion: That the Coordinating
25 Committee assign each study group with the appropriate issue
26 to study during the following year; each one of the six
27 study groups each get one of these issues. Therefore there



1 is no name change, but you still get a group studying one of
2 these issues and not going off on several groups studying
3 the same issue.

4 MR. R. RICHARDSON: Do we have a seconder for that
5 motion?

6 MR. M. MUC: Seconded.

7 MR. R. RICHARDSON: Discussion, Graham?

8 DR. G. GRIFFITHS: I would like to speak against that
9 motion as it stands since there were six topics and we only
10 have about five available study groups; I think it is too
11 rigid.

12 MR. R. RICHARDSON: I don't necessarily think that's
13 the problem, because it is not a problem to change study
14 groups, for members to change study groups, they merely have
15 to request it, and I think the important thing is that the
16 areas of concern and the fact that we may, that another
17 study group that at the present moment is not viable may
18 become viable by members transferring.

19 MR. R. WHISTANCE-SMITH: Just to correct what Graham said
20 there, there are in fact six study groups; the Energy group
21 still exists, it is formally chairmanless at the moment, but
22 it will be reformed very shortly. I will speak against the
23 motion, too, and the reason is that several of these topics
24 fall into categories that could be better dealt with if the
25 problem or the issue itself is divided into component parts
26 and then assigned to the new appropriate study groups,
27 picking particularly out, for instance, the land use issue



1 which has the component parts that best fit into, for
2 instance, Non-Renewable Resources, possibly, and again into
3 the Urban Environment Study Group. There may be other
4 component parts of it, but I would vote against it because
5 of that. I wouldn't want to lock the Coordinating Committee
6 into saying, okay, the whole of this issue is that study
7 group's ball park and the rest of you can't touch it. I do
8 think we have to take a firm hand, perhaps, in identifying
9 the component parts, finding out what the problem really is,
10 and then going from there and doing the job properly, making
11 sure the right group has the right issue.

12 MR. M. MUC: I think that is commendable, the
13 work that the group has put into it, but I don't think we
14 should get carried away and say because of that we're going
15 to support it. I think basically what we are suggesting is
16 that we have seen poor management of the resources that we
17 have, i.e. six groups. We tend to feel that the Pollution
18 Study Group, which I am a part of, only should handle things
19 that are identified with pollution, which is ridiculous
20 because there are many factors of pollution. I think that
21 simply the suggestion here, and I feel that others support
22 this, is that we should have a stronger designation of
23 responsibilities overlap, cross-meetings, whatever else; we
24 should work as an effective body. It is management, it is
25 not restructuring. You can do that forever and ever, but as
26 soon as you get down to the management issue of what you
27 have to work with, then you can very effectively deal with



1 any issue, and recognize that that issue is not isolated to
2 one group but to the Environment Council's issue and use
3 every resource of every group that can sort of speak to it
4 or has the expertise to work on some facet of it. So I speak
5 for the motion.

6 MR. R. RICHARDSON: Thank you, Mike. Any other comments?
7 Are you ready for the question? All in favour?

8 (SHOW OF HANDS - 3)

9 Contrary?

10 (SHOW OF HANDS)

11 (MOTION DEFEATED)

12 I think the Coordinating Committee tends to hear
13 loud and clear that maybe we haven't quite been doing our
14 job, or they haven't been doing the job that they should in
15 coordinating and in planning. However, this planning
16 exercise was extremely valuable. I think that one of our
17 problems is that we don't do enough planning within the study
18 group, either. You maybe plan one or two meetings ahead
19 instead of planning what we're going to tackle for the year.
20 Graham?

21 MR. G. NORMAN: I would like to propose a motion to
22 the effect that PAC concentrate on the six areas identified
23 by Martha in 1982.

24 DR. M. KOSTUCH: They are not identified by me.

25 MR. G. NORMAN: Okay, identified by the Coordinating
26 Committee, then.

27 MR. R. RICHARDSON: Joe Shemanchuk seconds the motion.



1 Is there any discussion on this motion?

2 MRS. J. FINLAY: Joy Finlay, and I would just like to
3 make one mention of the Energy Group. It is called the
4 Energy Conservation Group. It does seem to have a very
5 limiting, although most worthwhile, scope. We get listed as
6 having something like nine members; two of them are no
7 longer members. If you take a look at the membership, you
8 would find how many people are being active in the last
9 three years, there is probably three people. So we suffer
10 from inadequate numbers, and the time and energy spent on
11 being a chairman of a committee that is not a viable
12 committee is a waste of energy.

13 MR. R. RICHARDSON: Very well put.

14 MRS. J. FINLAY: So in the interests of energy
15 conservation, I would suggest, and this is just a point for
16 consideration, I don't think it reflects on the motion
17 specifically, but that the Coordinating Committee take a
18 look at the name of Energy Conservation and maybe broaden
19 that to take in some of those other big areas of energy
20 concern, which might mean it would take away from some of
21 the existing study groups, but some of the existing study
22 groups are already overloaded anyway. So I am sure that if
23 we could ask the Coordinating Committee to take a real look
24 at where these issues might be handled, we could get some
25 members involved in energy in a broader sense.

26 MR. R. RICHARDSON: Thank you very much. Do we have
27 another comment here at the back?



1 MR. F. THOMPSON: I can't say that this is addressed
2 to the motion directly, but I think what we have is a
3 philosophical problem as to what the role of the Coordinating
4 Committee, what the role of the study groups are. Are they
5 in essence independent entities that follow their own star,
6 or is there to be coordination? There is a Coordinating
7 Committee whose purpose of coordinating would seem to be to
8 coordinate the issues. And I don't think it is a question
9 of management or a question of the management of the
10 Coordinating Committee; in the past I think it is really a
11 question that a lot of us feel that there would perhaps need
12 to be a shifting in philosophical emphasis on how we deal
13 with the issues, whether there should be each one doing
14 their own thing, or whether there should be in fact greater
15 coordination, and I personally do object to that an issue
16 is assigned, whether it be assigned or originated within a
17 study group, that that study group handles that by
18 themselves. I think it is a waste of energy, because we
19 don't end up with something that is significant enough to
20 make a real impact. And we don't get all the perspectives
21 except in the annual meeting when we are debating a
22 resolution, but a lot of things never get to a resolution,
23 partly because sometimes they end up in the wrong place.
24 Thank you.

25 MR. R. RICHARDSON: Any other comments?

26 DR. G. GRIFFITHS: I support the motion, it is fairly
27 generalized, and I would make the comment that I hope that



1 the planning work which was done this summer will not be
2 wasted. As chairman of the study group, I find during the
3 course of the year that there was a problem in that we have
4 never been assigned terms of reference other than the titles
5 of the groups, and environment protection means everything
6 to everybody. There were a number of items on which we
7 started doing work and then were told that they were
8 appropriate for another study group. Now this kind of
9 problem of overlap would be removed if study groups did
10 receive specific lists of topics from the Coordinating
11 Committee, and the planning effort of last summer did produce
12 those topics, and I think with a little extra work, perhaps
13 a pre-planning meeting in December would be sufficient, one
14 extra meeting would be sufficient to break down this list
15 of topics and assign it to the individual study group
16 chairmen so that they in January could then plan their
17 programs accordingly, and we will not get into overlap
18 problems during the coming year.

19 MR. R. RICHARDSON: Thank you, Graham. Any other
20 comments?

21 MR. C. WALKER: I will just throw this one into
22 the fire. I'm new to PAC, and the one thing I notice,
23 further to Graham's comments, is that environmental
24 protection seems to be what PAC as a whole is about. It
25 seems to me kind of strange that we have one committee that
26 is named Environmental Protection when really everything we
27 do is environmental protection. I'm kind of wondering, I



1 realize that obviously the suggested name changes and
2 re-organization is a result of existing problems with some
3 of the mandates of the various study groups, and I am
4 wondering if perhaps all that is required is a little fine
5 tuning, because that is what we are talking about here.

6 MR. R. RICHARDSON: I think you are quite right there.
7 One more question. Bill Batycky.

8 MR. BILL BATYCKY: I am just looking through the roles
9 document and I don't find the role of Coordinating Committee.
10 Maybe that is intentional; maybe it doesn't have to be there.
11 I can see the problem if the Coordinating Committee then
12 mandates what the various groups will do, are they really
13 in that position to do it? Now I don't know; I would suspect
14 so. Maybe it is in here somewhere else, and I have just
15 looked under the heading Coordinating Committee, so maybe
16 that is a possibility for the upcoming Coordinating Committee
17 to also undertake.

18 DR. M. KOSTUCH: I think that has been a problem in
19 the past where the Coordinating Committee at one time was an
20 information exchange. All they had was the chairmen came to
21 the meetings, reported what was going on in the study groups,
22 and the chairmen went back to the study groups and reported
23 what was going on in the other study groups. We have over
24 the past couple of years tried to play a more active part
25 in the coordination, and I agree there is an awful lot more
26 work to be done there. Some of the planning and some of
27 the work has to come from the study groups themselves,



1 because it is senseless of the Coordinating Committe to
2 decide that you are going to work on a certain issue if the
3 study group has no interest in that issue within the study
4 group. So it has to be a cooperative effort; it can't all
5 come from the top, it can't all come from the bottom. It
6 does have to be more coordination of the issues.

7 MR. D. PATCHING: Just one quick comment, Mr.
8 Chairman. I have the impression this motion will probably
9 pass, and I would ask a rhetorical question, and that is,
10 how is it going to be implemented? I don't really see this
11 resolution being anything more than putting a lid back on
12 the kind of work which was opened up by Martha's original
13 resolution. Like I say, it is probably rhetorical, but I
14 would really like honestly to know how - the mover can speak
15 to this - how it can be implemented and what would the changes
16 be indeed from what was before? I also suspect that there
17 is something deeper that also has to be addressed and is not
18 being addressed because everybody wants to go away and get
19 on to other business. I toss that out as a challenge as
20 well.

21 MR. R. RICHARDSON: Thank you, Doug. Graham.

22 MR. G. NORMAN: The intent of the motion was really
23 so that we as a group here would recognize and accept that
24 these are the areas that we will tackle in 1982. They are
25 purposely not stated as to how it would be implemented,
26 leaving that to Ron and his group.

27 MR. M. MUC: Just one question. I can't quite



1 understand the statement that some groups may not like
2 something that is assigned to them. If this is an issue
3 that requires the group's expertise, it is not of matter of
4 whether you like it or not, or whether you have personal
5 interest in it, because then you are suggesting that it is
6 open to the whims of the group. If they're interested in
7 air pollution, fine; if they are not interested in water
8 pollution, then they go over it in a light manner. I think
9 if it is coordinated, it is a challenge to the group, and
10 often when you don't like something, it brings out the real
11 quality of the group and they have to rise to the challenge.

12 DR. M. KOSTUCH: That is true to a point, but we are
13 volunteers, we are not employees of the government, and so
14 it is only true to a point. I think we have to do take
15 that into account, the interests of our members. If we were
16 employees and we were being paid to do this, then, no; you
17 are assigned to do a job and you do it.

18 MR. M. MUC: If you are committed to environmental
19 issues, and that is where you are giving your time, it is
20 not that you are taking half a day off from work, it is a
21 little deeper than that. That is the essence of the people
22 I see around me, and that is why I hear the positive
23 comments about the people around me, that they are willing
24 to take these things. I think it is a sign of maturity when
25 you take on things that you may not particularly like but
26 it has to be done, and let's put our heads together and do
27 it.



1 MR. C. WALKER: What you are talking about is
2 bringing it to the people within the group who want to do it,
3 who have got themselves involved in a particular study group
4 because they are interested in those particular issues.

5 MR. R. RICHARDSON: Okay, does everybody remember what
6 the motion is that is on the floor? I believe Graham's
7 motion was that we attack these areas of concern during 1982;
8 is this correct, Graham? All in favour?

9 (SHOW OF HANDS)

10 MR. C. WALKER: Excuse me, do we have those issues
11 identified in the motion? As long as they are going to be
12 identified in the motion.

13 MR. R. RICHARDSON: Yes, as identified. All in favour?

14 (SHOW OF HANDS)

15 Contrary?

16 (SHOW OF HANDS)

17 (MOTION CARRIED)

18 I think that this has been a very good exercise.
19 It is an exercise that demonstrates the democracy in PAC and
20 I'm sure that Ron, who is the guy that is going to have to
21 -- Ron, are you listening? Ron, who is going to have to
22 lead the Coordinating Committee through this, I think that
23 Graham Griffiths' suggestion was very good, and that Ron
24 might put that under his bonnet there, that the group should
25 get together, have a pre-planning session, have agreement
26 on the basic subjects they are going to attack, and then go
27 back and lay out their yearly programs as to what issues



1 they are going to attack as basic issues, keeping in mind
2 that you are going to get some of these fire issues at some
3 times.

4 I don't know what else I can say to wrap up except
5 that it seems to me that in the discussion I hear that the
6 study groups would like a little more guidance from the
7 Coordinating Committee. They would like a little more
8 planning, and the Coordinating Committee feels that in the
9 past they haven't done enough future planning, and that in
10 future we should lay out our plans, go through a planning
11 process each year, at least review what we have, we may not
12 have to go through the whole process again, it may last more
13 than one year, but at least review it yearly so that we have
14 some path that we're all going down together, and that by
15 the work of each study group where they have got their
16 expertise, that they can all go the same way.

17 Now I hope everybody isn't going to rush out to
18 Bill and say I want to change this study group and this
19 study group and so on, but as I say, for any new members of
20 PAC that you have indicated a certain study group and you
21 now wish you had indicated another one, you may change your
22 study group without any great effort.

23 I will again, just before we break, I realize I am
24 five minutes over time, but then you had a half hour's break
25 listed, so you really don't need all that. So we do have
26 one more report, so I will turn the meeting back to Martha;
27 she may wish to do some wrap-up on this, too; I don't know.



1 DR. M. KOSTUCH: Thank you, Bob. I really
2 appreciate that, that was a difficult job, and I would like
3 to thank everyone here for participating in it.

4 We have one chairman's report left to go through
5 yet; Steve Thompson, the chairman of the Urban Study
6 Group.

7 REPORT OF THE URBAN ENVIRONMENT STUDY GROUP MOVED BY MR.
8 S. THOMPSON AND SECONDED BY CHRIS DUNKLEY.

9 DR. M. KOSTUCH: Any discussion? If not, I will call
10 the question. All those in favour of the motion to adopt
11 the Urban Study Group report?

12 (SHOW OF HANDS)

13 Opposed?

14 (MOTION CARRIED)

15 I would like to offer my sincere thanks to the
16 existing chairmen and to those missing chairmen - Marshall
17 and Lochan.

18 Coffee break time. Come back at 3:30.

19 (REFRESHMENT BREAK)

20 DR. G. SWINNERTON: As chairman of this last formal
21 section, I would like to welcome you to this one on Planning
22 for Resource Communities in a Booming Economy. I think it
23 is a timely subject. We have been addressing it indirectly
24 and alluding to it on a number of occasions over the last
25 couple of days. We started off making reference to it with
26 regards to potential development in the Peace country. We
27 have had issues brought to us this morning in relation to the



1 oil and gas industry, and therefore, it is obviously one of
2 considerable interest, and I think the fact that despite
3 our heavy schedule we have got so many people still here
4 is indicative of the interest.

5 It is therefore with great pleasure that I
6 introduce to you Dr. Don Detomasi, who is Professor of
7 Economics and Dean of the Faculty of Environmental Design,
8 University of Calgary. His major research and teaching
9 interests are in the field of regional growth and economic
10 development policy, and particularly in the analysis of
11 socio and economic environmental impacts of major research
12 development projects on small communities and regions.
13 In connection with these themes and areas, he has presented
14 a number of papers, published articles, and has been a
15 consultant to both the private industry sector and federal
16 and provincial governments in areas of impact and
17 development policy.

18 Therefore, it is with great pleasure that I
19 introduce you to Don.

20 DR. D. DETOMASI: Thank you very much. I want to
21 begin by saying that I am mindful of the fact that I am the
22 last speaker on the program, and thank you all for hanging
23 in there this long. I have attended a large number of
24 conferences of this type, although not necessarily this
25 organization, and I have to say that I am really impressed
26 by the degree of participation and the seriousness with
27 which you have all taken your work. But I know it is late



1 on a Saturday afternoon, and you are looking forward to a
2 nice evening, so I will not speak at great length today.
3 I will attempt to hold my comments down to 30 or 40 minutes,
4 if I can, during which time perhaps I can raise a number of
5 issues; in fact I intend to raise a number of issues, a
6 number of problems, related to the planning and policy
7 problems of small towns that are undergoing rapid and
8 dramatic change, usually as a result of resource development
9 in or near those communities. I am hoping that in the
10 comments I will make I can make some links with some of the
11 things that have been said by some of the other speakers at
12 the conference in the last two days.

13 I think the place to begin is to recognize that
14 the minute that even a rumour occurs respecting the
15 possibility of a major resource development in or near an
16 existing community, the public policy and planning process
17 is triggered. I think as all of you know and has been
18 amply clear from some of the concerns of this conference,
19 once the rumour begins something big might happen in an area,
20 the first response to that in that region or in that
21 community is rapid and significant speculation in land,
22 the attempts to have communities bring into development
23 annexed land, which immediately brings the interest of
24 members of the community and the development industry and
25 those, who in the first instance, see an opportunity to make
26 money simply speculating in land, but more importantly,
27 those who see an opportunity to develop land to accommodate



1 a future population. Those interests are quite clearly in
2 conflict with many of the issues that have been raised here
3 respecting agricultural land use and the preservation of high
4 quality agricultural lands, and as most of you know,
5 historically the agricultural use of those lands has taken
6 second place to the development use, largely because of the
7 predominance simply of economic forces.

8 It is very difficult for a farmer, particularly if
9 he is sitting on marginal soil, to turn down an opportunity
10 to turn his land over at ten or fifteen times the value
11 that it has in agricultural use. That is one of the major
12 problems to those of you who are concerned with preserving
13 agricultural land have to deal with.

14 I'm going to very briefly talk about the coming of
15 major economic activity and its impact on the community in
16 terms of the various stages or phases that that development
17 will go through. I have already alluded to the fact that
18 any information or rumour respecting the possibility of
19 development, immediately sets in motion dramatic changes in
20 the urban land market. That is about all that happens until
21 decisions respecting development are firmed, relatively
22 final, and public knowledge, at which time the community
23 itself begins to respond or must respond in a rational and
24 organized way.

25 This is typically what is called the construction
26 or pre-operation stage of the major resource development.
27 The first problem that is encountered in communities is the



1 problem of dealing with the influx of construction workers
2 whose job it is to put in place a major factory, a major
3 plant, heavy oil upgrading facility, a tar sands facility,
4 major coal-mining operation, mining and smelting operation,
5 it doesn't really matter what. The facilities themselves
6 have to be constructed, and large-scale facilities typically
7 require very large construction work forces, sometimes for
8 periods of time, four, five or six years.

9 One of the problems communities have got to deal
10 with is what will be the impact on us of all of those people
11 out there in the bush doing all of that work with all that
12 money to spend. As you know, this problem has traditionally
13 been dichotomized into the issue, is there a construction
14 camp that is relatively self-contained which houses all of
15 the construction employees, and in some cases the families,
16 for varying periods of time at the construction site. One
17 of the advantages of this, as you know, is that to some
18 extent it shields existing small communities from some of
19 the major impacts which having such a large number of people
20 in the vicinity would otherwise impose.

21 I think you all know that the impact on a small
22 community or a set of small communities in the region, can be
23 enormous; it leads to an immediate and dramatic increase in
24 the prices of all consumer goods and services available in
25 the region, a very dramatic increase in the price of land
26 and most especially in housing and rental housing. There are
27 almost always very significant social conflicts between



1 construction workers and local residents, and finally, as
2 you know, there are often serious environmental conflicts
3 between existing land uses, primarily in the area of
4 recreation, the rights of indigenous people in certain
5 areas and the recreation and leisure time activities of
6 construction workers.

7 I think it is in recognition of the magnitude of
8 the effects which large-scale construction activity has on
9 small communities that most recently the bulk of these
10 large-scale projects do involve work camps, which are really
11 attempts to isolate and minimize the impact of construction
12 on communities, and to give those communities time to
13 respond, to develop mechanisms for dealing with the impacts
14 that can't be avoided - the Saturday night rushes, the
15 jammed highways from the camp to the nearest town and so on.

16 There are, at the same time as all of that
17 construction activity is going on, and let us suppose as is
18 normally the case now, or frequently the case, that it is
19 being handled with construction work camps, most people when
20 they hear that breathe a sigh of relief and say, well, we
21 have isolated much if not all of the major impacts which it
22 will have on us, and we have a little more time to respond
23 to the long-term problem of preparing for the arrival of
24 the population who will be the permanent employees of the
25 facility, of the mine and smelter, of the oil plant, or
26 whatever it happens to be. I think it is important to make
27 explicit, then, that while all of the construction activity



1 is going on in some remote site, however isolated from
2 communities in the region, it is nevertheless necessary for
3 the community to prepare itself to receive a very
4 significant influx of population, largely those who will be
5 the permanent employees of the resource facility.

6 This triggers responsibility in both private
7 sector and the public sector for planning, financing and
8 ensuring the construction of all the physical infra-structure,
9 roads, water, sewer, utilities, housing, and a range of
10 social facilities and programs such as schools, recreational
11 facilities, health and education facilities, protective
12 services, all of these things which one knows will be
13 required by a soon to come permanent population.

14 These are all public sector requirements; they
15 require public sector policy decisions and planning
16 activities. On top of that, we know that there will be
17 expansion, significant expansion in the private, local
18 private economies, as local business firms attempt to expand
19 their operations in anticipation of the population growth
20 and the higher levels of income spending which will soon be
21 coming. Also, we will find the entry or the creation of
22 new businesses coming into the community because they see
23 an opportunity to serve a market which previously didn't
24 exist.

25 All of this growth, all of this demand for public
26 sector spending and construction activity which must go on
27 in advance of the arrival of the permanent population,



1 imposes another very serious impact problem for the affected
2 communities. That is simply this: In most cases, in almost
3 all cases where you're dealing with small relatively remote
4 isolated communities and regions, the local construction
5 sector is simply incapable of undertaking the broad range of
6 construction activity demanded by both the public sector and
7 the private sector as they expand operations in anticipation
8 of growth.

9 Typically, when you have an inflow, a large inflow
10 quite often, of construction workers whose job it is to build
11 the community - now these are not the people who are out there
12 in the bush building the facility, they come into the
13 community to build houses, to build roads, to put in water
14 and sewer distribution systems, to build schools, perhaps,
15 to help local businesses expand, et cetera - a feature of
16 this construction activity is that unless it is carefully
17 planned and coordinated, and historically it hasn't been, is
18 that it is undertaken by a relatively large number of
19 business firms from outside the region, and consequently, it
20 gets uncoordinated. There is no overall management structure
21 to provide for the needs of all of these construction
22 workers who are in the community building the community.
23 So while you may avoid the impact of site construction with
24 a work camp, you don't avoid the impact of a significant
25 number of construction workers and a significant amount of
26 construction activity in the community. And my experience
27 has been that this has not been very well planned or



1 coordinated in the past.

2 Consequently, this inflow of construction workers
3 of the latter type create many of the same problems that the
4 site construction workers would create. The major one, of
5 course, is a tremendous increase in the demand for housing,
6 a rapid escalation in rents, very significant overcrowding,
7 the emergence of tent cities and trailers, people living
8 in campers and basement rooms being subdivided, sleeping
9 quarters eight hours a day and so on. In addition, you
10 would get an increase in the demand for a whole range of
11 local privately provided goods and services, consumption
12 goods, entertainment and recreation, and you experience
13 congestion, overcrowding in those areas, and typically,
14 conflict with the existing residents of the community who
15 are not used to competing with outsiders. Finally, there
16 are in some cases behavioural characteristics of a large
17 construction work force that may differentiate them from
18 the residents of a small rural community, and that raises
19 certain kinds of social problems.

20 It is my opinion that this kind of impact, the
21 impact which is created by the need for the community to
22 build itself in anticipation of future growth, has largely
23 been ignored and has not been carefully planned for or
24 coordinated. It is one area, in my opinion, where there is
25 major room for improvement in the role of public sector,
26 social policy and physical planning.

27 Having talked, that is just a bit of digression,



1 but I think it is an important point to make, it is
2 surprising how often this factor has not been explicitly
3 addressed in the development of small communities until it
4 actually hits them, and I think Fort McMurray experienced it,
5 and I'm not aware of many people who anticipated it before
6 it actually occurred.

7 Let me come back now to the major planning
8 challenge which I began with, and that is the need to build
9 a community for the increased permanent population which we
10 anticipate will come when a large-scale industrial activity
11 commences operations. With respect to such things as
12 physical infra-structure, development and servicing of land,
13 the construction of community facilities and social services,
14 we need to know in advance how much and of what types and
15 qualities, where and when to provide all of these things.

16 The planners in the audience know from experience
17 and education, and as most of you know intuitively, the
18 critical factor needed for planning and decision-making in
19 terms of providing things such as infra-structure, land
20 development, housing and community facilities, is of course
21 the size, the composition, demographic characteristics, and
22 the timing of the arrival of the new population.

23 So to do good planning and to make good policy
24 respecting community development in these circumstances
25 requires that you have a reasonably sound ability to predict
26 the magnitude at least of the population growth which is
27 going to result as a result of the coming on-stream of a



1 large-scale employer. Much of the development required for
2 a community development in anticipation of growth is largely
3 size dependent, and the planners in the audience will know
4 that there are a significant number of planning activities
5 where the major determinant of the need for those
6 activities is simply population size. The number of people
7 is a major determinant, for example, of serviced land needs,
8 of the quantity of housing, not the quality or the kind, I
9 will come back to that point. Infra-structure capacities,
10 for example water and sewer and transport, there are certain
11 capacities that certain population sizes simply require; unless
12 you get dramatic behavioural changes or technological changes,
13 planners are fairly good at predicting what capacities are
14 needed to service what size population.

15 The size of local government and administration,
16 protective services, fire and police, certain social
17 services and commercial and retail space requirements,
18 although again not the type or quality of those
19 requirements, all of those things depend very largely, not
20 exclusively, but very largely on the population size. That
21 is, given a population of a specific size, planners can work
22 out reasonably well the magnitudes and levels, et cetera, of
23 the facilities and services required to deal with that
24 population. They can go from there and work out better or
25 worse land use plans which detail their location and space
26 and their relative proximity to one another.

27 The problem of predicting the size, I am still



1 right now focusing on size of population growth, the size
2 of a population growth is sometimes not a very difficult
3 one, and at other times a very difficult one, and I will try
4 to explain what I mean by that. We usually have very good
5 information respecting the size of the operations work force
6 which a large industrial development is going to employ, and
7 quite often, although not always, we have reasonably good
8 information respecting the family sizes or family
9 characteristics of that operations work force, and as you
10 would guess in the case of a small community about to
11 undergo growth, the major cause of the population growth
12 will be facility employees and their families. As a rule,
13 we have reasonably good information respecting that.

14 The major problem, in my experience, with
15 forecasting population growth that will occur in the
16 community or region is that of forecasting the population
17 growth which is induced by growth in the local economy. As
18 we know, when a large-scale employer locates in an area and
19 commences operations, let's say there are 4 or 5,000
20 employees, that is a lot of payroll, and all of those
21 employees in addition to requiring infra-structure and
22 housing and everything that I mentioned earlier, are going
23 to be spending a lot of money in the community and local
24 businesses know that. Well in advance, presumably, they
25 have begun to expand their operations and have begun to
26 attempt to hire new employees in order to provide this
27 higher level service. The question is, can we predict how



1 many new jobs will be created in the local economy, what
2 economists call induced employment creation, and how many
3 of those jobs will be filled by existing local residents
4 and how many of them will be filled by immigrants.

5 Now if you have a real boom economy with inflated
6 wage levels, the chances are that most local residents who
7 wish to work will by now have been employed either by the
8 facility or by all of the construction activity going on in
9 the community, and the chances are that the majority of new
10 jobs created by the local private economy will in fact be
11 taken by outsiders. Now not all, to be sure; some people
12 will be induced into the work force who hadn't previously
13 worked, some people who were unemployed may now be able to
14 get jobs. But by and large, employment creation in the
15 local economy is a stimulus to population growth, and there
16 is some relationship, then, between the number of jobs
17 created in a small economy and the number of people who will
18 be moving into the community over and above those associated
19 with the major employer and the major facility. The
20 question is, how much.

21 Planners and economists can model that fairly
22 carefully, and that is one way of trying to estimate what
23 the population growth is going to be. Second way, of
24 course, is to go into the community and survey the business
25 community, and to try to determine what their expectations
26 and plans are respecting expansion of activity and the
27 number of jobs they individually think that they will be



1 creating, and then you add them all up. I have had
2 occasion to do that on two or three occasions, and in all
3 cases an interesting phenomena arises, one that I have heard
4 discussed here. Somebody mentioned the other day there is
5 a business a day or a business a week going out of business
6 in the industrial park here in Grande Prairie. What you
7 find is the phenomena of over-optimism amongst the local
8 business community. Everybody expects that he is going to
9 do better than average. As a rough rule of thumb, in my
10 experience, which isn't exhaustive or extensive, is that
11 local businesses tend to over-estimate what in fact they
12 will do by about a hundred percent. So that if an economist,
13 a geographer, a planner, working with good information
14 predicted that a community would create 200 new jobs in the
15 local private economy, if you surveyed the business
16 community, what you would be likely to find is they would
17 tell you they plan to create something between 3 and 400
18 new jobs. Now who is right?

19 Again, in my experience, it has been that the
20 local business community has not been right, because each of
21 them bases his expansion plans on the assumption that he is
22 going to do better than average, and of course everyone
23 can't do better than average, and it tends to work out that
24 collectively they are over-optimistic. But that is one of
25 the problems with forecasting population growth in a
26 community.

27 Those two factors taken together give us some,



1 hopefully, reasonably accurate estimation of the population
2 size that a community is likely to attain at a certain point
3 in time. I want to mention very briefly that there are --
4 serious fiscal problems for both the public and private
5 sector will arise if those estimates are significantly
6 incorrect. I will come back to that point in a minute.

7 In addition to the size of the population growth
8 likely to be experienced, the second factor has to do with
9 the timing of the arrival of that population. It is
10 important to both local government and the local private
11 economy, and the reason it is important is largely
12 financial. Things such as housing, infra-structure, certain
13 public facilities, have to be in place when the population
14 arrives. If you have too much in place too soon, the
15 question emerges how do you pay for it. How do you carry
16 an over-investment in infra-structure and plant equipment
17 and facilities when the population that you assumed was
18 coming hasn't arrived yet. Or if it has arrived, it is much
19 smaller than you thought it would be.

20 On the one hand, the problem is excess capacity,
21 and excess financial burden for those residents who are
22 there in the community to bear that burden through the
23 tax structure. On the other hand, if you make the other
24 error, it is a problem of insufficient capacity, congestion,
25 the need to expand capacity well before you planned to, and
26 the occurrence of significant financial costs that otherwise
27 could have been avoided. The same problem emerges in the



1 private sector. A business firm expands its capacity in
2 anticipation of certain size population growth, or in the
3 belief that that growth will occur in two years. If the size
4 is wrong, or if the growth does not occur for four years,
5 that business firm is in trouble, and Cold Lake is an
6 excellent example of that situation. In an era of 20 percent
7 money, carrying 20 empty houses can be one heckuva a burden
8 on any small builder. Or carrying the cost of doubling the
9 capacity of a hardware store can be a real burden on a small
10 merchant.

11 There has always been some risks of delay inherent
12 in this process for developers, house builders and business
13 people who have always built those risks into their
14 calculations. It is the risk that there will be shortages
15 or bottlenecks or a strike which will hold up construction
16 of a facility, and which will cause the population not to
17 arrive when we all thought it would. What has happened most
18 recently, of course, is we have got a new player in it which
19 has not had nearly the importance historically, but that of
20 course is the role of federal and provincial governments in
21 using their approval or lack of approval for resource
22 development projects as a political weapon, on short
23 notice deciding not to approve things, as the Government of
24 Alberta did as a result of the NEP.

25 On the other hand, you have got activities by the
26 federal government such as the NEP which overnight, or the
27 coming of a Budget, which overnight changes the prospects



1 of a resource developer, in the case of energy resources,
2 and causes an operation which one week before was thought
3 to be certain to now become problematic. It raises a very
4 serious problem in the fiscal health of both local
5 government and the local private economy will be affected.

6 The fiscal health of both sectors depends on being
7 accurate in forecasting both size and timing of population
8 growth, and planners, I will say, are getting better at that,
9 that the timing question is now in a cocked hat with the
10 resource development, because of the role that governments are
11 now playing in changing the plans of resource developers on
12 very short notice as a matter of political policy.

13 All of what I've talked about so far, the
14 extensions in a community's economy, the private sector and
15 the tremendous expansion in the activities of the public
16 sector, roads, streets, lands, utilities, transportation
17 systems, all of those are largely deterministic, if I may
18 use the word, and I said this earlier, in that they are
19 related primarily to the size of population, and planners
20 have pretty good models that tell them what the population
21 that is coming in one end of your model, and it will give
22 you a pretty good read-out of the back end of what you need
23 by way of expanded goods and services. I think it is
24 important to recognize, however, that there is another
25 aspect of population growth which is equally critical to
26 the effective planning for the provision, especially for
27 public services and facilities, and where in my opinion,



1 much work and improvement are needed. This has to do with
2 obtaining information respecting the qualitative and
3 demographic characteristics of the population which is about
4 to come.

5 It is one thing to know the size and timing of
6 arrival, and those may be relatively easy to determine, it
7 is quite another to have some handle on such characteristics
8 of an immigrant population as its age, its sex distribution,
9 its income, its educational levels, its lifestyle
10 characteristics and behaviours, what expectations it has in
11 coming to the community, things like ethnicity and so on.
12 These characteristics of a population which are very
13 important for decisions respecting the provision of housing,
14 that is the types and quality and location, they are
15 important in effecting the decision respecting the range of
16 private sector activities that will be profitable, that can
17 succeed. They are important in determining the range of
18 what I will call discretionary public sector facilities and
19 services.

20 These discretionary public expenditures typically
21 fall in the areas of education, culture activities and
22 facilities, and recreation. Professor Swinnerton referred
23 last night to the problem of modelling recreation demands,
24 and pointed out that the characteristics of population over
25 and above its size, such as its income levels, its
26 educational levels, certain other lifestyle characteristics,
27 are necessary if one is to get a handle on the types and



1 ranges of qualities of recreational facilities and programs
2 to make available to the population. In the case of a small
3 town, the problem is equally pressing.

4 It is important because correct decisions
5 respecting the provision of goods and services by both
6 private and public sectors are critical in determining
7 whether a new population is satisfied and stable, rather
8 than transient with high rates of turnover, whether it is
9 happy in the new community, and I think all of you can
10 understand quickly the implications which this has for
11 social problems in the community and for the degree with
12 which an immigrant population is able to be integrated into
13 an existing social structure and so on. Local governments
14 only have so much money to spend, even in a boom or a growth
15 situation. Typically, the amount of money which is
16 available to them will cover what I have called the
17 deterministic costs associated with community development.
18 They will be able to finance the cost to them of providing
19 the hard infra-structure, the roads, and those protective
20 social facilities and programs which they are required to
21 provide. They may have a problem if, as I said earlier, if
22 people don't arrive on time; they may have a problem with
23 receiving the money in time to pay the bills, but typically
24 the tax revenues generated by that kind of growth will
25 cover what I have called the deterministic demands on local
26 government for spending.

27 Over and above that, local government with what



1 money it has left over, it is free to make discretionary
2 choices. You can provide a golf course, racquet ball courts,
3 swimming pools, or hockey rinks with your recreation dollars.
4 Well, do you provide an expanded library, a small local
5 natural history museum, or an art gallery as a cultural
6 amenity? Those decisions depend on the characteristics of
7 the people that you are planning for, and you can't plan very
8 rationally or coherently to provide those things with scarce
9 discretionary dollars unless you have some idea of the nature
10 of the population who is coming, and the relationship it
11 bears to the population that is already here. I think you
12 can see serious potential conflict emerging if the choices
13 which existing residents would make for discretionary public
14 spending differ markedly from the choices which a new
15 population wishes to make. In a democratic society in a
16 small community, the immigrant population is very likely to
17 be the voting majority, something you should bear in mind.

18 I would argue that there is a clear need for far
19 more extensive consultation in this respect amongst the
20 four actors in the resource development process, far more
21 consultation and integration than there has been to date.
22 It is the only way I can see to begin to obtain some of
23 this information and to integrate it and to fold it into
24 the public planning process. The actors, of course, are
25 local governments, regional and provincial governments,
26 planning agencies, planning bodies responsible for planning
27 in small local communities, the resource development



1 industry employer, and finally, but not least,
2 representatives of the existing community. The role of
3 citizen participation, I think, becomes absolutely critical in
4 helping local decision-makers to begin to make choices
5 respecting trade-offs between the wants of people who are
6 here now, and the somewhat lesser known wants of people who
7 are about to come.

8 The participation of resource development
9 employers and the two levels of government is the only way I
10 can see to begin to get some handle in advance on certain
11 characteristics of the migrant population which are obscured
12 by simply quoting the numbers that will be involved. I think
13 we have moved a long way in this respect if we examine the
14 case study of Fort McMurray where very little of this was
15 done, very little of this consulting activity was done, and
16 most of the development was done in a crisis management
17 atmosphere. To the Cold Lake situation where there was
18 relatively, at least in many dimensions, a relatively
19 effective attempt to get citizen participation in certain
20 decisions respecting the development and to seek information
21 from public interest groups and from citizen advisory groups,
22 the Cold Lake experience was a distinct improvement over
23 the Fort McMurray experience. I think we have to do better
24 if we are to plan wisely in development of these new
25 resource communities.

26 If we are unable to do that, I think that we are
27 looking at a situation where there will be more social



1 conflict than there ought to be, or than there has to be,
2 more dissatisfaction and turnover amongst new employees
3 coming into a community, a community in many cases where
4 both the employer and the residents of the community would
5 like them to stay, and the alternative may be, and I will
6 end here, a movement toward new town development rather
7 than existing community development. If you can't solve the
8 problems of integrating a large immigrant population with an
9 existing rural small town population, the alternative may be
10 to develop communities for major resource projects as
11 totally self-contained new towns, towns which are designed
12 in great detail and willingness to live in which becomes a
13 condition of employment with the major resource developer.
14 My own preference is for the former solution, the attempt to
15 mass these developments on existing communities if it can
16 be done sensitively and in a way which minimizes the social
17 and environmental consequences.

18 But I think we need a lot more information,
19 primarily about the people who will be coming into these
20 regions in order to do that effectively. Thank you.

21 DR. G. SWINNERTON: I think Don has given us a great
22 deal to think about, and I'm sure he would be willing to
23 entertain questions at this time.

24 MR. C. DUNKLEY: I would like to commend Don for an
25 excellent address, and I thoroughly enjoyed your subject
26 matter. I am very interested in your reaction to one
27 question; what capability does our Department of the



1 Environment have to provide leadership to, say, a Cold Lake
2 community association or any other community where they are
3 going through such fast, rapidly growing situations like
4 this? Because obviously they need help, and you have got a
5 very complicated decision with a lot of trade-offs and
6 varied factors at work as you very capably explained. Where
7 would people get that help from, and is the Department of
8 the Environment capable of providing it?

9 DR. D. DETOMASI: That's a good question and I'm not
10 sure how satisfactorily I can answer it. I don't believe
11 that the Department of the Environment, given its mandate,
12 is the best government organization to try to achieve this,
13 certainly not by itself. I would think the responsibility
14 of the provincial government, principally departments such as
15 Municipal Affairs and Housing and Public Works and Economic
16 Development, would be equally important. The advantage
17 which I believe the Department of the Environment would have
18 in attempting to facilitate this, to help improve it, is
19 that, I believe, has far more experience in dealing with
20 public interest groups, with citizen participation process,
21 than have most of the other departments of the provincial
22 government. So it is just an impression I have, but I think
23 it is correct, that what expertise, however much there is,
24 and experience which provincial government departments have
25 in serious attempts to involve the public in policy making
26 and planning, most of that expertise and experience lies
27 with the Department of the Environment. So they have got a



1 headstart in doing it. But I think the information that is
2 required and the concerns that I have raised are broader
3 than those which are typically the responsibility of that
4 department, and it would really have to involve three or
5 four government agencies at a minimum.

6 MR. M. MUC: I would like to ask a question. The
7 term "boom town" has been with us for a long time; wouldn't
8 you think we would learn from our past experience, yet it
9 may be something that we can't eliminate simply because we
10 live in a democratic society, one that respects private
11 industry and the profit motive. And although you can study
12 it to death in the sort of scientific intellectual context,
13 you can't, as you gave an example with the businessman being
14 overly optimistic, you know, suggest here is the blueprint
15 to follow. Do you think that there is going to have to be
16 some invention of one sort or another to prevent these
17 things from being as catastrophic as they might be if they
18 are not controlled a little more from the developmental
19 viewpoint? Considering the point you suggested would be
20 necessary to implement it at the various stages of
21 development?

22 DR. D. DETOMASI: I think the major thrust of my
23 paper would be, yes, I don't know if there is need for more
24 intervention, we have an awful lot of that. Tom Priddle,
25 whom I notice is here, might say we have far too much. But
26 I think it can be better. It can be better, and I think
27 we have improved significantly in the last decade in this



1 respect. One of the characteristics of boom towns, at least
2 every one that I've ever visited or looked at, is that this
3 kind of rapid growth and development conveys tremendous
4 private benefits on the existing residents, economic
5 benefits. And typically imposes significant public costs.
6 By that I mean costs to local government, and against those
7 large private benefits to existing residents, also have to
8 be offset social conflict and environmental damage. I think
9 we know a fair amount about the nature of the environmental
10 impacts of these kinds of developments. I don't think we
11 know nearly enough about the nature of the social impacts of
12 these kinds of developments, and I'm arguing it's important
13 to obtain primarily more information about the nature of the
14 people involved in these boom towns than we have been able
15 to do or have attempted to do in the past.

16 I think as long as it's the case that we
17 individually benefit, and sometimes tremendously, privately
18 from the sudden growth of our town, it will be very, very
19 hard politically to resist permitting that growth to occur.
20 When I talk about benefit individually, I mean put yourself
21 in the position of someone whose house has gone up in value
22 five times in one year. That person is very happy about
23 that. A person's business now has a capitalized value which
24 is three or four times what it was a year ago based on its
25 growth potential. That person is happy about that, and
26 whether those things make him happy enough to pay for the
27 social and environmental impacts that are sometimes quite



1 negative is a different question, but that is always one
2 of the problems in boom towns is that it can mean very
3 significant private economic gains to the people who are
4 there when it begins. Most people historically have been
5 reluctant to turn their back on those gains by saying to
6 the development, go somewhere else. In fact, most of them,
7 in my experience, try as hard as they can to maximize, and
8 we saw this in Cold Lake, people running out and buying
9 lots and houses, buying up land, speculating in business
10 when they didn't know anything about it. This is all an
11 attempt to maximize that private economic gain which one
12 sometimes can get by being there first or early.

13 MR. M. MUC: You are reiterating that your own
14 gains are going to be greater than the losses shared by the
15 body.

16 DR. D. DETOMASI: I think that's correct. Most
17 people, unless they are very sensitive, especially to
18 environmental things like many of you here would be, find
19 that what they have to give back out of their gains isn't
20 nearly -- to pay their share of the costs isn't nearly as
21 high as the gains themselves, and they view themselves as
22 net winners economically and they get on a boat to Hawaii
23 to escape the environmental problems that are still there.

24 DR. G. SWINNERTON: I think Cam Finlay, in fact, is
25 the next one. Can I just remind questioners to identify
26 themselves, please.

27 MR. C. FINLAY: You have identified me. I am



1 interested in the types of people that one would get in a
2 community in a boom town, and how can you attract a certain
3 type of people or can you attract? I am thinking culturally,
4 socially, you mentioned museums and those kinds of things;
5 can you attract into a new community those kind of people
6 that would want that, or alternatively, those kind of people
7 who don't want that? In other words, how do you predict who
8 are going to be the new people who are coming into your
9 community?

10 DR. D. DETOMASI: One way that is obvious is if those
11 people are to a large extent currently employees of the
12 organization that is coming in; that sometimes is the case
13 in resource development. What you need is more private
14 information about them than perhaps company files typically
15 contain, but which probably they would not be offended if
16 you asked them to provide as a device for planning for them.

17 Another case, and this is something that I am not
18 aware has been done but could be done, is to turn the thing
19 around, to derive some notion of the kind of community that
20 existing residents want to see develop, and then hire
21 people who are congruent and make your hiring policy an
22 attempt to match to the extent that you can characteristics
23 of the people you hire with the community that they are
24 going to go to. I think there has been some movement in
25 that direction.

26 DR. G. SWINNERTON: Could I just interject as a point
27 of information; I know this is what has happened in the



1 Netherlands that when they established new towns like
2 Lederschdadt and places like that, they worked out a social
3 structure, a social economic structure, for those
4 communities and basically built communities with a mix of
5 religious, socio-economic groupings.

6 MR. T. PRIDDLE: My name is Tom Priddle. I heard
7 you discuss the various actors that get involved in
8 expanding existing places, or in the building of new towns.
9 Of course, being from the private sector, can I suggest
10 there is another act that should be involved. The developer
11 of the facility may or may not be involved in housing
12 construction or the infra-structure kind of things that go
13 on, as this gentleman was saying over here, for cultural or
14 other events. It seems to me that the prime example of how
15 not to develop a boom town is Fort McMurray. Fort McMurray
16 was designed by one department of the government, built by
17 another department, never seemed to get finished; when the
18 Indians told them don't build over there, I wouldn't build
19 over there, they built over there because it was flat, and
20 of course it gets four feet under water every year, which
21 the Indians knew but the government never did figure that
22 out until it started floating. I would suggest that rather
23 than have a government-designed town, that they should
24 invite private enterprise. Now, I probably get into trouble
25 when somebody says, God, we're going to get the private
26 developers in there again. But at least the private
27 developers have better information on what to build, what



1 will sell, what will attract people, than does government.
2 The City of Edmonton are still using statistics on the kind
3 of populations that are going into X number of units that's
4 about seven years old. They designed a subdivision in
5 Castle Downs and they said it is going to have X number of
6 bedrooms, therefore it is going to have X number of adults
7 and X number of kids. Thou shalt build a great big park
8 full of old tires and things for the kids, and guess what,
9 the place filled up; instead of the 103 kids they wanted,
10 they got 4. So now they said, thou shalt tear that down
11 and build some more garages for all the cars and boats that
12 these people have. So at least private industry has a
13 better handle on the kind of things that these people are
14 looking for in these new towns and government, I wish you
15 would comment on why you miss out on one actor.

16 DR. D. DETOMASI: Yes, that wasn't a deliberate
17 oversight, Tom. I am surprisingly going to agree with much
18 of what you said. The point that I was trying to make,
19 first of all, I think that there is a major role for the
20 private sector to do much of the development that occurs in
21 these towns. The private sector, the private land
22 developer and the house-building industry needs the kind of
23 information I'm talking about every bit as badly as do the
24 people who plan the public sector activity. What they now
25 know may be better than what the public sector knows; that
26 is a debatable point. But if you are to deliver the kind
27 of housing that people want, you need to know more about



1 those people than simply how many of them there are and
2 where they are going to come. You are right, that was an
3 oversight, because I think that the whole private economic
4 sector merchants, they need to know, too. But those who are
5 primarily involved in the delivery of housing need better
6 information. What I didn't do was include the developer as
7 an actor in obtaining that information. But there is no
8 question in my mind that a) the private development industry
9 has a major role to play in these communities, and b) they
10 need better information. Because you can build a number of
11 units for the kind of population that the planners predict
12 are coming, and the situation you described emerges is that
13 what you built doesn't match the needs of the population who
14 arrive. Now you built what you were told more or less to
15 build, and it turned out to be the wrong thing, and the
16 reason it was wrong is precisely what I have been arguing,
17 there was not enough known.

18 There are other examples of that which I won't
19 go into, but that is one of the things that creates social
20 problems to provide a large number of relatively high
21 density townhouses for a population whose expectation is
22 for single-family detached is to create problems, forgetting
23 about economics of the two solutions. If people who live
24 in multiple-family dwellings, townhouse-type developments,
25 behave the same way as they behave in a single-family home,
26 you have got problems, and we know that that has happened
27 for example with one of the major developments in Fort



1 McMurray, an incredibly nice piece of design and
2 architecture construction that hasn't worked very well
3 socially because the people who moved there didn't want to
4 live that way.

5 MR. G. PASCHEN: Gerry Paschen, Non-Renewable
6 Resources. I guess we are all familiar with the term that
7 Canadians have been hewers of wood and drawers of water.
8 Just a very small example is when Canada, I guess, got the
9 first railroad, all kinds of immigrants were brought in to
10 build the railroad, Chinese as an example. Many died,
11 couldn't adapt to our environment. Here we have resource
12 developments on the drawing board for the Peace River
13 district, and people are coming from all over the place or
14 the province or other provinces to make a living. They are
15 outsiders, they have, similarly as those people who went
16 up to Dawson Creek, and I call them Klondike mentality,
17 they come here just to make a dollar; they try to fit into
18 the existing environment, and after maybe seven or eight
19 years, leave. So they are here just to make that dollar
20 because they have a problem elsewhere where they came from,
21 and take their money along with them. So we have those
22 kinds of people to deal with, too.

23 But I think when resource development wants to go
24 ahead, they are generally on such a large scale that new
25 towns and villages have to be built for those, or at least
26 extra annex to be added. So I think that if we are looking
27 at resource development on a much smaller scale because



1 those resources whether they are timber, water or non-
2 renewable or gas, a great deal remain with us as long as we
3 manage them properly. So I think they're looking at a
4 smaller scale in the resource development there would be less
5 disruption and less people involved in the long-range
6 planning as to how to get them out, or how we are going to
7 get more water for their domestic requirements and all the
8 other related things to it. So I have the general feeling
9 that we are very much in a hurry. The nation is very, very
10 young and yet we move in so rapidly, and later on we
11 realize, oh well, we contaminated this river or somebody
12 else's backyard, or moved half a mountain or something like
13 this, so I think that the whole attitude towards this
14 resource development would be good to slow down a little
15 bit, and I think we would keep the existing population which
16 have made their home there and their relatives, you know,
17 we keep that harmony, and I think that it is a very
18 important part, and I hope that strategies of this nature,
19 unless I am proven wrong, could be adopted quite easily.
20 Thank you.

21 DR. D. DETOMASI: I don't think that was a question.

22 MR. R. WHISTANCE-SMITH: Ron Whistance-Smith. You answered
23 part of my question before because Cam, I think, put some
24 of what I wanted to put into words. But to keep myself
25 from rambling, I have written it down anyway; it is partly
26 comment and partly question.

27 How do we know who will come, let alone the



1 demographic characteristics? How do we find that out? A
2 job list for a particular mega-project would really only
3 indicate in a rough manner what educational background might
4 be. The age range of those people to be employed, the family
5 composition and the cultural background seem to me to be
6 beyond the capability of the forecasters. What if we were
7 to forecast, for instance, another influx of young workers
8 from the Maritimes? Who would have predicted that we would
9 need a Newfoundland club in Fort McMurray? Plus young
10 entrepreneurs, say, from Alberta comprise a great deal of
11 the new, I think this is in Fort McMurray for instance.
12 What if we wound up instead with a coincident oil boom in
13 the Maritimes which kept all those people home, and an
14 economic downturn in Ontario which freed up a number of
15 people with different cultural backgrounds, different
16 educational backgrounds, and in fact perhaps a great many
17 Latin American or Southeast Asian newcomers, who then
18 comprise your influx? It seems to me like you answered in
19 a way part of that by saying you would set up criteria for
20 hiring people; would that not contravene human rights
21 legislation by excluding people from backgrounds other than
22 those that you particularly want?

23 DR. D. DETOMASI: Well, on the last point, last
24 point first, I'm not sure; it might. That's a good point.
25 Certainly there are certain characteristics that ought to
26 be irrelevant through employment within the bounds of age,
27 sex, race; things like that certainly are irrelevant.



1 I suppose if you hired to try to create a work force that
2 matched an existing community or some plan you had for that
3 community, you might very well run afoul of human rights
4 legislation. Okay, with respect to your first point, an
5 awful lot of that information is in fact available or could
6 be obtained at the time someone is hired - age, sex, family
7 size, the occupation has a rough income level, a rough
8 education level to go with it in most cases. It is just a
9 matter of making use of that information for planning
10 purposes, and perhaps augmenting it if they are known, as
11 they would be in the case of employees of a firm or people
12 who have just been hired. If once you have done all that,
13 if you've got all that information, you can begin designing
14 a community to respond to it, and then that information base
15 changes because of a boom in the Maritimes or a bust in
16 Ontario, then I guess you've got a crisis management, you
17 have got a problem, and I haven't thought my way through
18 that one. I don't know that, Ron; it's a good question.

19 MR. G. GREEN: George Green. You had mentioned a
20 couple of ways in which new work population can be
21 accommodated. One was into an existing community with
22 changes, or second was by developing a new community. The
23 Provinces of British Columbia and Saskatchewan have been
24 encouraging fly-in/fly-out operations; I think there are one
25 or two here in Alberta, as well, associated with mining
26 projects. What potential do you think that method has for
27 alleviating the kinds of concerns you have mentioned for



1 Alberta?

2 DR. D. DETOMASI: That is the new town/no town
3 dichotomy. Yes, I think there are certain kinds of
4 activities with the technology of production, the
5 circumstances of employment are such that it is feasible,
6 well it is certainly being done, where the operation's work
7 force remain at the site for a certain period of time in
8 probably relatively Spartan quarters and flies in and out.
9 That has been adopted as first of all a more economic
10 solution than the construction of a permanent community,
11 and secondly, as a way of avoiding many of the social
12 impacts that would be created if you tried to put this
13 large work force into an existing small community in the
14 region. I think part of the economics of it depend on
15 whether it is a finite resource in the lifetime of the
16 project, and you don't want to put in all of the infra-
17 structure, construct a large community that does not appear
18 to have a long-term economic base.

19 I notice for example, I don't know how many of
20 you caught this yesterday, that the federal government has
21 given seven months' notice on closing down Uranium City, in
22 effect, the Eldorado Mines there. Now there is about
23 3500 people, 800 jobs that will terminate in seven months.
24 Now if that mining operation, and whatever else goes on
25 there, is not picked up by the Government of Saskatchewan,
26 you have got a ghost town. There is no other economic
27 base there at present. One way of avoiding that problem,



1 I don't know whether it is the government, the feds, Eldorado
2 is going to close it down, I haven't read about it, but if
3 you have that situation where there is a very finite
4 lifetime of the resource, or a tremendous high probability
5 of a real boom and bust situation where you might have a
6 long period of time where it is a glut on the market with
7 massive unemployment as we have from time to time in
8 Sudbury, Thompson, it may be wiser to locate those people
9 200 miles away in a relatively large urban centre that can
10 absorb them with modest social and environmental
11 consequences and fly them in. For certain kinds of
12 activities, I think it is a very viable solution.

13 DR. G. SWINNERTON: Any more questions?

14 MR. S. THOMPSON: Steven Thompson. One of the
15 problems which you have identified is the cost of providing
16 the infra-structure and so on, which really faces the
17 community as well as the cost of doing the planning, in
18 other words, what resources are available. Usually, in the
19 case of a resource development or industrial plant that has
20 the same effect on a community is known not necessarily by
21 the general public but is known by the company or the
22 government at some time prior to that happening. Now, my
23 observation is that quite often the resources that are
24 made available to the Regional Planning Commission or the
25 local planning body to be able to gear up to do the planning,
26 to pull this information together is usually not there until
27 after the growth is upon it. The same with the infra-



1 structure, and one of the things that I would like to hear
2 you talk about is whether you feel that the company as well
3 as the senior governments who give this permission to
4 develop this resource should in fact along with that
5 provide these resources to these communities and to their
6 planning bodies to attempt to put at least the beginnings
7 of the infra-structure in place by the time the growth
8 comes, as well as the companies when they are doing their
9 environment impact, that one of the impacts is also to the
10 surrounding communities to also project the length of time
11 at which this resource is intended to go on for and be very
12 realistic to the local community. I don't think it will
13 affect the speculative actions of the local people, but it
14 might moderate it to some extent and sort of minimize the
15 negative impacts that one might have. It certainly has
16 created a great deal of difficulty in terms of, you know,
17 when the resource comes, how are they going to handle it,
18 and planning it; and putting it all into place by government
19 ahead of time is not necessarily the answer, either. The
20 local people still lose their sense of destiny, if you will.

21 DR. D. DETOMASI: Well, just very quickly state, I
22 don't think there is any question historically the amount
23 of resources that the public sector has devoted to planning
24 of major resource development communities, it has been
25 woefully inadequate. Almost all, well all small
26 communities lack the internal capabilities to do their own
27 planning; they simply don't have it and the responsibility



1 lies with the regional office or with the provincial
2 planning board, and it is my opinion that you are right
3 that the amount of resources that have been devoted by
4 government departments to that kind of planning activity
5 have been inadequate. So even if they had the best
6 information, it still would not necessarily have led to the
7 good planning.

8 Part of the problem, of course, is the issue of
9 the first question, how would the Department of the
10 Environment be in energizing more civic input into these
11 kinds of things; it is this departmentalization of
12 government agencies, they are organized for organizational
13 efficiency along departmental lines, when the problem we are
14 talking about is an interdisciplinary planning problem
15 requiring the knowledge and skills of people from
16 departments such as Social Service, Housing and Public Works
17 through Municipal Affairs to Environment. My opinion is
18 first of all that the only way you can really get effective
19 planning for developments of this kind is through an
20 interdisciplinary team representing the knowledge and skills
21 of at least those four agencies.

22 Your second point, I think that the resource
23 development firm or agency, the private sector actor or
24 consortia, has much to offer by way of information and
25 analysis; I'm not sure whether it would be necessary for
26 them to actually participate in this kind of planning
27 activity, although they could help to finance it as they



1 have done in some cases with the public participation
2 exercises, as you know. My experience has been that
3 certainly energy resource industry, that business firms
4 have been pretty responsible. They have very recently in
5 this respect, they have reacted to what the public and
6 governments have demanded of them, and it may be our fault
7 that we haven't demanded or asked for enough. But they
8 certainly could play a role there, yes.

9 MR. D. MORSE: My name is Don Morse, and I have
10 some written points in the question. Some communities in
11 the Peace River region tend to segregate those new
12 residents you are talking about from existing residents,
13 and to separate residential neighbourhoods. I am wondering,
14 do you feel there is an effective way of integrating these
15 two social groups?

16 DR. D. DETOMASI: No. Inevitably, well not
17 inevitably, but quite often what that does is set in motion
18 the seeds of the old town/new town conflicts. I don't
19 believe that physical separation, certainly one to one
20 physical separation, is a way of handling or minimizing
21 social conflict. I suspect it will make it worse. As you
22 may know, in Fort McMurray I believe the decision there was
23 made to not build a new town to compete with the old town,
24 but rather to have a number of new communities each
25 separated from the other in an attempt to avoid the problems
26 that just two communities would present. But if there were
27 four or five interacting that that might work, and I think



1 school is still out on that. It seems to me intuitively to
2 be a better solution than simply an old town and a new town
3 and the two competing with one another for a whole range of
4 public and private activity. I don't think that is the way
5 to achieve it; maybe there is a social scientist here who
6 would have a better opinion on that question than myself,
7 but my instincts certainly tell me no.

8 DR. G. SWINNERTON: Do you have some other points as
9 well, or not? Any other questions? That being the case,
10 it only remains for me to thank Dr. Detomasi for a most
11 informative and enjoyable session. I think we have
12 benefitted a lot from it. I think it meant that we have
13 certainly ended the formal part of the session on a high
14 note, and I am sure you would like to join me in thanking
15 Dr. Detomasi in the usual way.

16 (APPLAUSE)

17 DR. M. KOSTUCH: Before you leave, I would like to
18 formally thank the Planning Committee for all of their
19 efforts. The members of the Planning Committee were Ron
20 Whistance-Smith as chairman, Betty Hunter, Guy Swinnerton,
21 Pat Seymour and Terry Shewchuk. I would like to thank the
22 committee, and as well, I would like to thank Betty Meier
23 for all of her cooperation and assistance which she gave
24 to the Planning Committee, and Bill Flook particularly for
25 lining up the airplane. Bill is always guarding our money
26 so jealously, I'm really surprised he did get us an airplane
27 but it is really a pleasure to fly up here. I would like



1 everyone to give their thanks to these people.

2 (APPLAUSE)

3 (SUPPER ADJOURNMENT)

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1 MR. CRERAR: I think that we should get started,
2 because Jack wants to get back to Edmonton, and probably
3 back to Lacombe tonight, and we have a deadline where he
4 has to go away. So the sooner we start, the more questions
5 you can get in.

6 Now, this is the third time that I've had to introduce
7 Jack to this audience. You know that old saying about I
8 am introducing a man who needs no introduction, that applies
9 double, triple, or something, when you have the Minister of
10 the Environment addressing the Environment Council and the
11 Public Advisory Committee.

12 One of the characteristics of Jack, I think, is that
13 you may have noticed that he is a sucker for a fast ball
14 when it is being thrown in the legislature. He swung a
15 couple of times and not really hit the ball at all. But
16 there has been an experience that he went through in the
17 last, well, just the last couple of weeks, when there was
18 a filibuster. It looked like it was just a normal sort of
19 thing when it started off, but what happened was they sort
20 of spun the wheel of fortune and came out on some project
21 that was being supported by the Heritage Trust Fund, and
22 then they got stuck there. Well, Jack was one of the first,
23 I think he was the first, in fact, when the needle stuck at
24 a particular project that was going to be subjected to very
25 severe scrutiny, and so he was up before all the House for
26 something like 14 hours. And the question was, I guess,
27 whether Jack was going to strike out again.



1 But they happened to pick Lesser Slave Lake, and Jack
2 was superbly prepared, and he may also have been lucky, but
3 he was very fortunate because they questioned him on the
4 costs.

5 Well the original costs that the big engineering firm,
6 the consulting firm came up with and said it was \$7.8
7 million it was going to cost. Jack had had his people go
8 through it and cut it back to \$8.4 or \$8.3 or something
9 like that -- no, pardon me, \$3.8. They cut it in half.

10 So, that was not any kind of, they could not lay a
11 glove on him in that particular aspect. Then they started
12 asking questions about fisheries, and it turned out that
13 in fact they had got fish and wildlife and they were doing
14 a whole great examination on a place called Blind Bay --
15 very apt I thought. Anyway, that was completely covered.

16 Then they started asking him about how much per acre
17 was the land that would be created cost, well, that was
18 going to be \$3.8 million, and there was going to be 30,000
19 acres reclaimed and 30,000 acres that would be improved,
20 and it worked out to something like \$71 or \$77, and there
21 were a lot of people with calculators who were working out
22 what it was, and they couldn't believe it, because if you
23 get land of any kind for \$71 in Alberta today, it has got
24 to be pretty good.

25 So then they went on to public participation, and it
26 turned out that everybody who lived around a lake had in
27 fact been involved in public participation, and Jack was



1 able to tell me that he could give them their middle names
2 and first names if they really wanted it. In other words,
3 for 14 hours they were knocking him back and forth, and he
4 was just batting these things out, just perfectly. It was
5 an absolutely stellar performance. But as luck would have
6 it, the media didn't report a thing.

7 So I give you our featured speaker tonight, the
8 Minister of the Environment, lucky Jack Cookson.

9 THE HONOURABLE JACK COOKSON, MINISTER OF ENVIRONMENT:

10 Mr. Chairman, Your Worship the Mayor,
11 his good wife, members of the Environment Council of
12 Alberta and others that may be here including the media;
13 are they here by the way Alistair? I am getting so gunshy
14 about the media, my speech will be rather short.

15 The 14 hours, by the way, was an interesting exercise,
16 it did come in different periods, but I remember quite
17 vividly going into this session, I think we were about two
18 hours into it, I had papers all over and books under here,
19 you know, pulled all this stuff together, but my notes were
20 all mixed up, and I was trying to find a certain paper. So
21 there was a considerable period of time, quite a pause, and
22 there was one of the ministers that was working just down
23 from me and he was very busy working on something in front
24 of him, and I heard him mumble to the other fellow next to
25 him after a long pause, "First time I have ever observed
26 a fellow go to sleep giving his own speech."

27 I will try to keep -- well maybe I shouldn't, I should



1 keep my remarks long, because there would be a short
2 question period. I am like the fellow that was giving a
3 talk this night to a large group, and like most politicians
4 they go on and on and on, and it is one of the occupational
5 hazards of the business. Finally he concluded and noticed
6 that he had been speaking an awfully long time and said to
7 the chairman who was standing there, "You know, I really
8 want to apologize for the length of my speech", whereupon
9 the Chairman said, "Well, you know, there is really no need
10 to apologize, you have helped shorten the winter."

11 So there is a positive side to a long speech.

12 Thank you very much for inviting me, Alistair, to come
13 up and say a few words to the group this evening at their
14 annual convention, and I know that you are here from
15 different parts of the province, and you are representing
16 different groups from out of the province, and I think you
17 have had a very interesting and challenging two days as I
18 have looked over some of the agenda, and anytime you have
19 someone like Dr. Fred Bentley speak to you, I think it was
20 on your agenda, is Dr. Bentley here by the way? He has got
21 about the same amount of hair on his head as he had 30
22 years ago. You keep very well.

23 So it is indeed a pleasure to perhaps say a few words
24 to you and look forward to some good inquiring questions.

25 There were two things I think that Alistair suggested
26 that perhaps I could speak to you about. Because you are
27 from different groups throughout the province, many of you



1 have little knowledge of the inner process of legislation,
2 how it takes place. I could say a few words about that,
3 because of my own experience over some ten years in
4 government now, that is at the provincial level. I spent
5 some six years at the municipal level, where I got
6 indoctrinated into the whole exercise. That is where this
7 little fellow came along way back in 1967, and he has a
8 great power of persuasion and got me into this exercise, and
9 I happened to experience defeat, and I will say it is a
10 great experience, it is very humbling, and following that I
11 was elected to the legislature. So since 1971 I have had
12 an opportunity to sit back and observe and to occasionally
13 inquire, and I say occasionally, because once in awhile when
14 I start to inquire too much I get sort of jerked up a little
15 bit.

16 Because of the numbers in the legislature, they place
17 some of the government members on the opposition side, and
18 the premier goes through a great exercise and pulls the
19 names out of a hat. That is what he says, but I have
20 noticed it is very consistent that if you are sitting on the
21 opposition side, you have a tendency to start taking a little
22 bit of the opposition's role, and invariably that person's
23 name always comes out of the hat to go back on the other
24 side. So I had some short trips over there, and some pretty
25 rapid trips back.

26 It is quite an experience. I probably am most famous
27 in terms of private legislation, private bills, when I



1 asked that the age of majority be raised from 18 back up
2 to 21. I was prepared to compromise at 18 if it got down to
3 that, but it never got down to that, and I guess that brief
4 moment of fame is somewhere back on the shelves to be dusted
5 off by another MLA or member of the government at some later
6 date. Needless to say, I still think I am right.

7 I am a little like the fellow who said he always agreed
8 with his wife because he knew he was right anyway, that's
9 something to think about.

10 I took over the onerous task of being the Minister of
11 the Environment in the Spring of 1979, and Alistair suggested
12 perhaps the next area of responsibility might just coincidentally
13 be the Minister of Social Services and Community Health.
14 Well he said, "You are pretty well roasted on one side, you
15 might as well be roasted on the other side too."

16 Anyway, to talk about the inner workings of government,
17 I think that was sort of the expression that was made with
18 regard to how the system works, and it might be interesting
19 for all of you to realize that if you wish to change a piece
20 of legislation, it is a very complicated exercise. I got one
21 word changed this fall in one piece of legislation. I
22 started out with quite a bit, but when it all shook out, it
23 ended up with one word, and that was in the Research Trust
24 Pact which permitted us to broaden the way in which we
25 invest funds for research dealing with the environment.

26 It starts out, let me run you through a scenario -
27 December 1st was the deadline for legislation for the



1 spring. That is how much lead time we need to run this stuff
2 through the system.

3 It starts out first of all by drafting through special
4 trained people in the niceties of the law, and then we take
5 it through to caucus committees, these are MLA committees,
6 not cabinet ministers, but simply members who have a
7 particular interest, in most cases, in a particular area.
8 We have, for example, a committee on agriculture, committee
9 on education, we have a special committee, as you know, on
10 the problems of water, and as you know, we have a few
11 problems on water, and especially last week.

12 Talk about water leaks, we have other leaks too. And
13 there the minister is required to make the presentation to
14 the cabinet caucus committees, and they may decide they do
15 not like it, or they may decide they think it is all right
16 and it needs some changes. We may have to modify it. Once
17 we get through that committee, we are routed back to cabinet,
18 or we may go to cabinet first on principle. Briefly as to
19 the principle, and then to the caucus committee.

20 Then we are chased, perhaps, into caucus as a whole,
21 the whole caucus of some 73 members, where we have to go
22 through this exercise and explain the pros and cons, the
23 pluses and minuses, and argue the case for changes. Once
24 we get through that, if we are lucky, we have to go into a
25 committee of cabinet legislative review, and that is a
26 tough one. And sitting around in that crowd, of course,
27 there is some pretty well qualified cabinet ministers in the



1 area of the law and great at debate.

2 It is there where you get the really close scrutiny
3 on legislative changes. Once we get past that hurdle, we
4 may be home free, but if they are not sure we could get
5 chased back to caucus of the whole. So far we haven't been
6 sent over to the opposition, that comes later.

7 But once we get through this complex area, and you can
8 appreciate the time involved. We have some hundred and
9 some pieces of legislation this fall, some minor, some
10 major, transportation of dangerous goods is one, and other
11 pieces of legislation that would be, I'm sure, of interest
12 to the Environment Council. Once we get through that
13 exercise, it is ready for final draft, and then goes into
14 the legislature for the different steps that take place.

15 You start out with first reading where you give the
16 principle of the bill, it is not debated at that stage.
17 Then you go into second reading where it is major debate.
18 A classical one would be this fall I recollect is the one
19 where we brought in a very controversial bill dealing with
20 power, and how we would handle the prorating of power
21 across the province. However, some advocates say we should
22 buy power companies out, but there are good arguments for it,
23 and others say we shouldn't. This was an attempt to
24 compromise, politics being the art of compromise, that is
25 the intent behind that legislation, and it will effect all
26 of us in the future as far as power rates.

27 The Minister of Utilities and Telephones brought that



1 through with major debate, and if any of you have had a
2 chance to read the Hansard or observed the television
3 recording of it, you appreciate the ministers have to have
4 a pretty good working knowledge of the legislation pros and
5 cons before they get to that stage. Of course, that is why
6 those checks and stops are in there before it gets there.

7 Once you get through second reading, you get into what
8 is known as Committee of the Whole, and in Committee of the
9 Whole, you go clause by clause. It is the duty of the
10 opposition, but also our own members who may have some
11 feelings, I know one piece of legislation this fall that
12 was stopped at that stage by one of the government members,
13 went back to caucus, and subsequently came back into
14 legislature. There are some pretty strong feelings at times
15 when these things happen.

16 If it gets through the Committee of the Whole, then
17 clause by clause, and then from there it goes to third
18 reading, which is often a fait accompli, although there
19 is debate then too. I think in the case of the bill on the
20 utilities act, that received some debate in third reading.

21 Once it gets through those stages, we are pretty well
22 on the way, although we can still decide not to proclaim
23 the bill, depending on how it is worded. They never get
24 proclaimed. Some legislation is sitting there that has
25 never been proclaimed, and so it is not an easy task. It
26 is very complex, and I just thought I would share that with
27 the members here so that you would have a better understanding



1 what has gone through. Keep in mind now the legislation
2 for the spring of 1982 is now in the mill. It has to be
3 in order to finally become before the legislature in
4 whenever the spring session commences.

5 The other area that was suggested that I perhaps I
6 touch on is the philosophy, I guess, insofar as the cabinet
7 itself is concerned, perhaps caucus, as to industry versus
8 environmental matters, and how that works through the system.
9 One has to keep in mind that we are all of different
10 backgrounds and different upbringings, and we tend to
11 reflect somewhat that background, that upbringing. I
12 happen to be from a very rural background, a rural setting,
13 and there others that have never been outside the city.
14 They have perhaps quite a different philosophy.

15 Not only are the members impacted by that philosophical
16 difference because of their backgrounds, they are also
17 influenced through their life by great people, men and
18 women, and their schooling and what they are exposed to,
19 and perhaps by other dramatic events that may have taken
20 place in their lives.

21 Finally, if they find their way into the position, that
22 ministers are in, there are some 28 of them, are there,
23 they are also influenced by the legislation that they have
24 to administer, and by the objectives in a sense that are
25 set down for them; and let me give you an example of that,
26 perhaps without necessarily dealing with personalities. We
27 have the Minister of Economic Development, regardless of



1 what his background is, his job is really to establish
2 industry in the province, that is really his job, and he
3 has very minimal legislation. But all permits and all
4 applications, as far as industry is concerned, has to come
5 through his department.

6 So you have to remember then, that generally speaking,
7 he would gather around him within his own department, and
8 I say generally speaking because it does not necessarily
9 follow through, but it is logical that his people would be
10 gung ho for industry, and so, you know, you have a combination
11 of that situation in that department.

12 You have a Department of Agriculture where the minister
13 primarily, now again dealing with the legislation before
14 and his objective is to promote agriculture, and to argue
15 for agriculture, and goodness sake he has had his fair
16 share of problems in that particular area, and handles it
17 very well.

18 There are other departments that you know, Social
19 Services and Community Health have tremendous problems with
20 the administration of the legislation they have, and the
21 people problems that one has to, and very -- well Alistair,
22 don't wish it on me. It is a tough one - people problems.

23 Then you have the department which I administer, my
24 own department is upwards of a thousand employees throughout
25 the province, and we have a budget of, well it was going to
26 be approximately 500 million, but we get cut back you know.
27 I'm not sure where we are at right now.



1 By the way, the budgetary process now is in the mill,
2 and I have to face the little fellow with the stiff cap
3 before long and tell him it's a tight operation, and we
4 have A and B proposals, and I don't think that the B's are
5 even going to make it on the map. But we have to, we have
6 to control very tightly the budget, and I am totally
7 supportive that we have to set an example, particularly for
8 the municipalities who, in a sense, are our front runners
9 for a lot of the problems, they are closer to it.

10 So in my own department I administer about 13 or so
11 pieces of legislation, and they, the department people
12 themselves, are made of up greatly varied backgrounds, from
13 biologists, entomologists, geologist, engineers, and I could
14 go on and on and name the variable backgrounds. But the
15 legislation dictates the, again going back to the philosophies
16 without talking about backgrounds, the kinds of attitudes,
17 the way in which we administer our legislation, and my
18 experience over the last several years has been interesting
19 to say the least, and fairly exciting. Hopefully I would
20 like to think that probably the biggest challenge is the one
21 we are facing right now in terms of our own department, our
22 environmental problems, and that is the problems of special
23 waste, of which the Environment Council of Alberta held
24 public hearings, and I hope that when the curtain comes
25 down, we will be able accomplish everything that we set out
26 to in terms of that report. It's a tough one.

27 Well that really, Mr. Chairman, sets out for you a



1 little bit of the history of the department in terms of
2 the interaction of cabinet ministers. We have varied
3 backgrounds, we represent a little bit differences in
4 philosophy, we are influenced a lot by the burdens that are
5 placed on us, mine is to look after the environment.
6 The way in which I go about it may at times not appear to
7 the public as perhaps the best approach. Some think that
8 we should be tougher. I think that a recent survey indicated
9 that, well, I looked over the survey done by the Environment
10 Council of Alberta, and I could comment a little bit about
11 it because surveys, while they are important, they are
12 sometimes somewhat subject to question. I think politicians
13 find that out on occasion prior to election.

14 So I hope that we all have a common objective, and we
15 may find different routes to get to that objective. My
16 experience has been that one tends to have more luck by
17 compromise and continual positive approach to an issue,
18 but certainly be prepared to compromise it. In the process,
19 you know, you should, hopefully, gain more than you lose,
20 and the head on approach is a very difficult one, I think,
21 for my department, because we overlap into so many other
22 departments. If you can't get the confidence of your
23 colleagues, then it becomes very difficult to -- it's the
24 same as a family, of course, everybody agrees but father,
25 but if father is strong willed, it is sometimes difficult
26 to achieve what you wanted to do.

27 I have found that the caucus cabinet are generally



1 supportive insofar as environmental matters. I think I
2 can make that a generalization that they are supportive
3 of environmentalists, but there is a trade-off always
4 insofar as ambitions, aspirations of the province. It
5 goes back to the concept of Dr. Horner, back in 1967 or so
6 when the government first, our government first started to
7 begin to show signs of taking over from a kind of tired old
8 situation, and well, the argument is made that we are
9 starting to get there too, but if that is the case, we still
10 got about, I guess, we have got about 20 years to go.

11 But original concept that we would no longer be drawers
12 of water and hewers of wood, Doc used to say that a lot, you
13 know, and you hear a lot of it in this part of the world,
14 his constituency was not too far from here. That has kind
15 of helped to set the tone for a lot of things that happened
16 in the province. I'm not going into the politics of things
17 because quite frankly I am very proud of what has happened
18 in the province in the last ten years. I would be prepared
19 to debate it with anyone.

20 But the fact is that when you get growth like that,
21 you have conflicts with environmental problems, and keep in
22 mind that the Environmental Department was only established
23 in 1971. I remember making the first presentation, and I
24 had just taken over the ministry, I wasn't too sure how that
25 word was spelled, but I know it was important. But I can
26 assure you now that I now know how to spell it.

27 So we have I think an exciting time, it is sure
28 exciting down in my constituency right now, I don't know



1 about anybody elses, but we have announced two days ago
2 that there would be a billion dollars in expenditures in
3 the constituency in the petro-chemical industry, and some
4 of you may be here that represent some of the group down
5 there, and it is groups such as that that can make a
6 contribution. Because I don't think, quite frankly, that
7 some our fellows really understood, really understood, what
8 do I say, is the seriousness or the gravity of the problem
9 until we met that very strong force, not very many in
10 numbers, but certainly a very strong vocal force of
11 problems and this happened to be problems of agricultural
12 land.

13 So they can help us, and as I told the group, some
14 you win, some you lose, but in that exercise down there,
15 I felt they won, because even the ERCB which is a hearing
16 process, were able to make some changes because of those
17 presentations. The company in this case concerned has made
18 some major changes, and I think we are all the wiser for it.

19 So I do not want to take any more time, Mr. Chairman,
20 I just thought I would share those thoughts with you, and
21 I would be happy to have -- have you only got one mike,
22 Alistair, get a couple up there and let's get at it.

23
24 (APPLAUSE)

25
26 DR. M. KOSTUCH: I wish I had an opportunity to thank
27 you this year, Mr. Minister, but I don't get that opportunity
28 this year.



1 Are there any questions of the Minister? Mike?

2 Q DR. M. MUC: Mr. Cookson, we are in an envieable
3 position here in the province that we have a tremendous
4 Heritage Trust Fund, and I am going to focus on that point
5 because I admire the government the way that it resists
6 the request to use that and to exploit that, but on the
7 other hand, we have the tremendous environmental resources
8 that is also getting the pressure for exploitation and for
9 utilization, and I think the Government is not taking the
10 strong stand that it is with respect to economics that it
11 could take with respect to the environment. That it is
12 able to buffer the pressure put on it, yet with respect
13 to the environment, it hasn't taken the same firm stand and
14 suggested, no, this is the heritage for our future generations
15 of Albertans as much as the economic one is. What is the
16 difficulty, is one more desirable than the other, or should
17 one get more preferential treatment than the other, or
18 what is sort of the status of that discrepancy?

19 A I want to go back just briefly to the survey that was done
20 in answer to that question, and it showed across Alberta
21 while it was ambiguous in some ways, it showed, for example,
22 part of the survey indicated, the majority of the percentage
23 indicated, that while they perceived of the environmental
24 problems, when they were asked whether they had an
25 environmental problem or didn't have one, that is the kind
26 of ambiguity that was in that survey. It showed that in
27 certain areas at the time the study was done, that they



1 were more concerned because of a local issue, in that case
2 it was the Red Deer, when we had that survey done, whereas
3 in the north, I think I am correct, Alistair, I do this just
4 on recollection, but in the northern part of the province
5 they were unsatisfied with the way we were handling the
6 environmental problems. Well, there was even a difference
7 in the age groups when you split the age groups, where one
8 age group, the older folk felt we were doing a pretty good
9 job, and the younger folk felt conversely.

10 When we try to assess all that on the basis of that
11 survey, I conclude it was probably all things taken into
12 consideration, about 50/50. I don't know whether it helps
13 to answer your question with regards to economics and
14 environment or not, I just use that.

15 Q May I then suggest that what I am hearing you say is when
16 the people suggest to the government that they are disturbed
17 we will react, but at the present time feeling the pulse of
18 the people through the surveys you are suggesting that there
19 is no need for action, therefore we will not act. Am I
20 correct or am I misrepresenting what you are suggesting?

21 A I am simply saying what that survey said. But insofar as
22 reacting, we do that continuously to issues, a classical
23 would be your hearings on hazardous wastes which I call
24 special wastes now. I got a letter the other day which
25 says, "You can't fool me", and the recent hearings on noise.
26 I have some new thoughts that perhaps I can expound on,
27 that may come in questions, insofar as some future hearings



1 that I would like to comment on briefly.

2 But we rely on the Environment Council to put forward
3 proposals. I have a tough time, you know, steering them
4 through the system. But we do react to problems, the
5 Pincher Creek thing, boy, we have done our best on that one,
6 and of course it is still going on. The Fort Saskatchewan
7 area where we have set up mobile units to analyze the vinyl
8 chloride monomer problem, we have a piece of equipment that
9 we are still testing on. So I don't know whether that helps to
10 answer your question, but we do try to react to problems
11 throughout the province.

12 DR. G. GRIFFITHS: Mr. Cookson, I would like to refer to
13 the report in yesterdays Edmonton Journal, entitled "Dangerous
14 Spills Omitted". I do not know if you have seen this report,
15 it is, of course, a concern to a lot of people here, and it
16 implies that there were many erroneous entries in the
17 hazardous chemical spill report which was recently tabled in
18 the legislature. There are references to a spill by Suncor
19 which the company denies ever occurred. There are
20 quotations from the manager of the Provincial Hazardous
21 Wastes team which implies that he has trouble in getting
22 information from the Disaster Services Branch, that is under
23 a different department. Even within your own department
24 there appear to be, and I quote, "Some organizational
25 problems in putting the information together."

26 Now, I don't know if you accept the information in this
27 report, if it is correct, it would imply that the information



1 being put out on hazardous chemical spills by your
2 department presently is entirely unreliable, and this is
3 the kind of thing that leads to lack of public confidence
4 in government. I don't mean to be making a party political
5 point here, but people must have confidence in such
6 information put out by the government if they are to be
7 cooperative and accept the actions of government and obey
8 the laws.

9 I just wonder if this report is true as it is printed
10 in the paper, and if it is true that much of the information
11 is unreliable, what do you intend to do about it to see
12 that we get reliable information in these reports in future,
13 please?

14 A Graham, I have quit reading the paper. I just fly by the
15 seat of my pants anymore.

16 But to respond to your question, it is a good
17 observation, I responded as a result of a question some time
18 ago, a motion for return in the spring that has taken us all
19 this time to pull this together, they wished to report on
20 spills et cetera, hazardous spills, from 1974 to 1980, I
21 think, and to give you an idea and all of the members here
22 on the complexities of the government, first of all we had
23 no legislation until 1977 on hazardous chemicals. We had
24 no schedules until this last year. So when I accepted the
25 motion I had to accept it on that basis. So that if we
26 stuck strictly to the definition, legal definition that
27 there wouldn't be anything prior to 1977 - 1978. But anyway,



1 when I tabled it I made that point that what I was tabling
2 were all the known spills which had come into our office
3 during that period of time and which had been filed and
4 reported by the environment. That is where the complexity
5 comes in.

6 We have had since several years ago a telephone number
7 listed in the telephone book, and when someone has a problem
8 with a spill, they may call that number; but they also may
9 call Disaster Services, which is the branch of the Municipal
10 Affairs Department under Mr. Tyler. Or they may call the
11 Energy Resources Conservation Board, which then comes under
12 Merv Leitch's Energy and Resources. Or they may call the
13 police, or call the fire department. I think that what we,
14 we try to do then in through our various departments is
15 interrelate these different reportings of spills.

16 So we have to keep in mind that I was simply recording
17 what we had information on. If the question had been to
18 Disaster Services, they would have reported on their spills
19 and so on.

20 Now, it is quite likely that they would have a different
21 list to some degree than we have, because Disaster Services
22 under their legislation respond to spills that are primarily
23 a problem of people. They may, for example, the Millwoods
24 event when they had the pipe eruption, Disaster Services
25 went in and did the people evacuation. However, if it comes
26 to a spill which may have some impact on the environment
27 itself, on the water, then our department takes over or give



1 advice.

2 As you will notice in that particular report, the
3 police more and more now, and fire departments, when they
4 are in doubt, are reporting or calling Environment immediately
5 in terms of a spill to determine how would be the best way
6 to handle it.

7 Now we have got another complexity. We have got another
8 actor in the game now. We have the transportation of dangerous
9 goods. So now we have dangerous goods, special wastes,
10 hazardous wastes, I don't know how many departments. Even
11 the Department of Labor is involved, and workers health and
12 safety within the plants. So, the media naturally see
13 discrepancies in that, failing to recognize that I was
14 simply reporting on the basis of my own department.

15 Now the other point which deals with Suncor is a very
16 interesting comment, you said it was made by Suncor themselves,
17 and that is the one I wanted to track down, I just don't
18 know. I simply tabled the report as it was presented. But
19 I think it is important for the members here to recognize
20 the complexity of this. It has been said that all these
21 branches of responsibility should come under one department
22 and I thought that would be nice and, very neat, but I don't
23 think it would work. It is something that the Council
24 could think about. I know you have had occasion to address
25 yourselves to this. It would be much handier for me to be
26 able to administer.

27 It is just not that way, I inherited this thing, and



1 it is very hard to change it.

2 Q MR. T. PRIDDLE: I am just a guest here, not a member,
3 so I can say whatever the hell I like. We have had very
4 interesting meetings on behalf of the industry with yourself
5 and Marvin Moore who will stick their feet up on the table
6 and talk about the subjects that we have to talk about. The
7 problem that we have is with the other colleagues, as you
8 call them, who sit down with 42 experts. You know, you go
9 in with one or two people and you have 42 experts, and they
10 all call on the experts, and you never do get the ministers
11 opinion. We get your opinion pretty straight. We get
12 Marvin Moore's opinion pretty straight, but you talk to
13 Merv Leitch and you've got 42 economists, and you talk to
14 somebody else and you have got all these other guys. I
15 wonder if you could straighten the rest of the cabinet out
16 on that situation.

17 My second question is, how fast are you picking up the
18 land in the area today around Calgary and Edmonton, and do
19 you have a budget for it, or are you just picking it up
20 under duress? Because the Mayor is sitting right here in
21 front of me, I have to say, are you going to promise that
22 you are not going to pick up all the debts of the municipalities
23 just before the next election? You picked them up at the
24 last election, and that's what they've been doing ever
25 since is spending money like crazy figuring you're going to
26 pick it up next time. Now he is shaking his head, this
27 is the only city that isn't, but the rest of the province



1 are spending money like crazy hoping you're going to pick
2 it up before the next election, and you know, you just
3 encourage them to be expensive, and I would hope that you
4 wouldn't do that.

5 Maybe you will answer those three questions? Thank you.

6 A Well the last observation, that never crossed my mind. But
7 then again, I am only one member. But it is a correct
8 observation, they did reduce the debt, and it is probably
9 true that the debt is going up, we've just got to control
10 ourselves. I don't know what more I can say about that
11 point.

12 The first questions on the R.D.A.'s, I think it would
13 be fair to say for those members here that do not know what
14 R.D.A. means, the premier hates these initials, and it means
15 restrictive development area, which comes under the
16 environment act and gives you the authority to declare an
17 area for a specific reason in terms of environmental protection
18 or whatever. It is a very powerful piece of legislation
19 because it takes away rights to some degree, but I guess it
20 is no more powerful than the Planning Act itself. There is
21 a lot in the way we use it.

22 We estimate probably 40 to 60 percent, I would say,
23 of the Edmonton R.D.A. is owned by the Crown, and a much
24 lesser amount than the one in Calgary. We generally speaking
25 do not aggressively buy unless it is for a very specific
26 reason, a reason that is very urgent. For example, a ring
27 road or an overpass, whatever, which is very necessary to



1 the arterial system . However, anyone within those areas
2 should come to us and say we would like to retire, or we
3 would like to be out of it and so on and so forth, we are
4 prepared to negotiate with those individuals.

5 Insofar as funding is concerned, I have a limited budget,
6 and I have some pretty explicit instructions as to what happens
7 if I go above it, which means that unless there is a very
8 special case that I can make, I have to stay within that
9 budget. The special case would have to be so special that
10 the cabinet would consider a special warrant which is a
11 provision which makes provision for purchase beyond the
12 regular budgetary matters. However, it must be of extreme
13 importance. We must be able to justify it on that basis.
14 For example, the special warrant this year which was passed
15 for fire protection of our forests is a classical example of
16 where there is no way you can budget for it, you must have
17 the funds, then comes the special warranty.

18 Does that answer those questions?

19 Q I would just ask one more thing. Some of the special
20 circumstances right now, well I represent the land development
21 industry as you are aware, and in some cases before we knew
22 where the R.D.A. was, a lot of developers bought land in
23 that area. They would very much like to get their money out
24 of that area so they could put it into housing in other areas
25 because of the shortage of housing; in some areas because of
26 the shortage of land, and the high cost of money while it is
27 sitting in R.D.A. is quite expensive, and I wonder, as you



1 said, for special circumstances where an individual might
2 want to retire, would that apply to a company who desperately
3 wants to get out of that so they can build houses somewhere
4 else? Can we make the case for that kind of thing?

5 A We will see how desperate it is when we look at your offer.
6 DR. M. KOSTUCH: When Jack said the premier hated
7 initials, I thought he really must hate PAC and SAC and the
8 ECA. Gerry?

9 Q MR. G. PASCHEN: Thank you, In view of the
10 fact that it takes a long time to get one particular word
11 turned into law, as you explained tonight, I was wondering
12 how long it would take, or at least how much success we
13 would have that one-half a word will be adopted from the
14 present resolutions which were passed today?

15 A I haven't had a chance to look at the resolutions, Madam
16 Chairman, but I am prepared to look at them when they come
17 in, and we will respond to you. I will make sure, I will
18 attend one of your advisory committee meetings and respond
19 to them as quickly as possible.

20 DR. M. KOSTUCH: We hope you will attend more than one,
21 we have appreciated this last year where you have attended
22 several. Ron?

23 MR. R. WHISTANCE-SMITH: I am just wondering in the
24 approval of the three new Petro-Chemical plants, again they
25 have been approved for central Alberta where there has been
26 I would say pressure on the water supply. We have had in
27 the meantime discovery of enormous quantities of natural gas,



1 a basic feed stock supply for a petro-chemical plant,
2 and I wonder why since these plants require so much water
3 they are announced for central Alberta rather than northern
4 Alberta? It is the old business of hewers of wood and
5 drawers of water again. It seems to me that part of the
6 decentralization would be to put, let's say over the long
7 term, an increase in population where the water was, not
8 where the water wasn't. Also these plants tend for some
9 strange reason to be best suited to good agricultural land
10 rather to poor quality land, and it seems to me that we
11 have more than one reason why they should have been announced
12 for the north rather than the central portion?

13 A Ron, that is an excellent point and I agree with you. I
14 think we have got to come down harder on future petro-
15 chemical plants, I think you will see that happen. Just
16 recently, in fact just the other day I think, there was an
17 announcement of a fertilizer plant at Peace River, an
18 expansion. The members represented the areas up through
19 here, Mr. Mayer, Mr. Borstad and others are very strong,
20 very vocal about this, and what we were afraid of, at the
21 time we had to make some quick decisions, was that if we did
22 not get the initial plants, we might loose them totally.
23 Perhaps I can explain to the members that the area of petro-
24 chemical business we've had reports at our meetings from
25 people throughout the world, is that we had a critical
26 period of five or ten years in which we capitalized on the
27 petro-chemical industry. After that it is conceivable that



1 we would lose vast majority of those major investments to
2 other parts of the world, namely Mexico and parts of the
3 Middle East, the OPAC countries. So there is a critical
4 time. However, we now have established a number of plants.
5 There are others that are being proposed, and I will do
6 whatever I can to put them either north or also east.

7 We had a long term proposal to move some industry into
8 the Hardisty area. Those familiar with the geography of the
9 province east of the Camrose line, and that is not a dead
10 issue, it's still there, however, the north with the
11 resources need that kind of growth. All I can say is that
12 we will do our best.

13 MR. K. BLOM: The Alberta Public Health Association
14 is what I represent here, and I have two questions. The
15 first question, the second one I will step behind this lovely
16 lady behind me, and I will ask it then later.

17 The first question has to do with solid wastes, if I
18 recall a year ago and the year before that we had a discussion
19 by you where in fact we would have a policy of the Provincial
20 Government set in place within the next few months, if you
21 will, in regards to the matter of solid wastes. I would like
22 you to comment on where we are in that respect right now?

23 A That is a good question, Ken, you are talking in general
24 about wastes or specifically the hazardous wastes?

25 MR. K. BLOM: In a general way.

26 A In a general way, again it is one of those strange complex
27 areas that we are in where the members here, in that it does



1 not all come under the jurisdiction of environment. We
2 interface very closely with Social Services and Community
3 Health through the health unit. What environment does,
4 and we are still attempting to clarify this one, hopefully
5 we are close to it, we have always done the technical work
6 for sitings. We have done the negotiations with the
7 municipalities, and that is really where our role ends
8 other than financing. We have funded some cases.

9 Now there are a number of different kinds of places
10 for wastes now. We have the ordinary garbage dump, we have
11 what are known as regional land fills, we have industrial
12 land fills, and we now have or are looking for special
13 areas for special wastes or hazardous wastes.

14 In the area of garbage dumps, for lack of a better
15 term, we are of the opinion that because of this overlapping
16 of jurisdiction, and that I think is supported by Social
17 Services and Community Health, that remains the responsibility
18 of the local health unit through their Social Services and
19 Community Health, subject to appeal to the Board of Health.
20 We will not fund, nor have we ever, the individual dumps.
21 However, we have done the technical work such as testing of
22 the water table and so on.

23 When it comes to regional which involves two or more
24 municipalities, we are funding those, and we will continue
25 to fund and we will continue to do the technical work.
26 However, the area of jurisdiction is still not clear. When
27 it comes to the industrial waste sites, those are totally



1 under Environment because we license and permit, and we
2 will continue to do that. When it comes to special wastes,
3 if we are talking about in regards to our hearings, of which
4 there will be two sites or so in the province, major sites,
5 plus possibly some assemblage which could be in some of the
6 garbage dumps, for lack of a better term, then I perceive
7 that we will fund, that is Environment, we will provide the
8 technical know-how and we will administer if necessary
9 legislative. Those are the four areas that I have laid out
10 for you, and hopefully we can keep those areas of jurisdiction
11 clear so that there is no confusion.

12 DR. M. KOSTUCH: Judy Roschlaub, Judy, although not a
13 member of PAC, has been a valuable contributor to this
14 conference.

15 MRS. J. ROSCHLAUB: Mr. Cookson, do you think that the
16 farmers up in the north have been able to get their concerns
17 across to the people in this province about vulnerability
18 of our soils?

19 A I think so, Judy, because I most recently, you know, made
20 adjustments as to the percentage emission particularly on
21 the acid soils. We are up to about 99 percent. That, I
22 suppose some say would go to 100 percent there, but I am
23 not sure it is possible. We did pass that special resolution
24 to tighten that down.

25 Q What specific incident was it that it was up to 99 percent?
26 Like there is the Chieftan plant near Hythe and they went
27 up to 97.7 I think?



1 A I am saying 99, perhaps I stand correction, but I know
2 we are in the 98, 99. Let me put it this way, it is higher
3 than we require generally in most other parts of the
4 province, and it came as a result of the concerns in the
5 north because of the acid soils.

6 Q You just made the statement about putting in petro-chemical
7 plants and that gives us some cause for alarm.

8 A Well, that is the dilemma Environment faces.

9 Q As it stands now, and as you realize, it can be proven in
10 a court of law that sulphur emissions are causing problems,
11 but with the radio isotope studies and things if it can be
12 proven, who do you see as picking up the costs for the
13 reclamation of the farm land, or to bring it up to even the
14 current levels now?

15 A I think we have already given some consideration as to
16 government picking up certain costs. The Minister of
17 Agriculture about six months ago, I think, announced a
18 special program for liming, and that will help to defray
19 some of the costs.

20 Q I'm well aware of the program since we are becoming involved
21 in it, we have been to some of these liming demonstrations.
22 The one in particular closest to us was just downwind from
23 the Tepee Creek gas plant, and the farmers there were putting
24 on three tons to the acre of lime at a cost of \$30 a ton to
25 the farmer. The government picked up about half of the
26 transportation costs. So with the application costs, we
27 figured it would be about \$100 an acre for the liming; if



1 nobody would probably lime all their land, but a lot of
2 farmers would have six quarters of land, and that is
3 \$90,000 or something.

4 A It's a big cost, but the question is, I think, whether we
5 have recognized this. One has to keep in mind that the
6 acid soil here is not necessarily all attributable to the
7 sour gas plant.

8 Q Oh no, most of it isn't, we were stuck with it by nature.

9 One last question, as I understand the department has
10 similar regulations for all across the province, and yet you
11 said here that in this one instance you would put up a
12 recovery rate so that farmers didn't always have to object
13 to every gas plant and make life miserable for people who
14 want to develop this resource; would it be possible to have
15 some legislation in place that would cover all, so that you
16 didn't have to do all these battles all the time?

17 A I wish I could, I don't know whether I can or not, I think
18 we will always face them. There is always going to be the
19 conflict between, let's say vested interests, and all we can
20 hope to do is minimize them.

21 DR. M. KOSTUCH: I think maybe we will have to move
22 along to the next question, but perhaps Mr. Cookson will
23 explain a little more what he means by the special regulation
24 on 99 percent. Ken?

25 MR. K. BLOM: I guess Madam Chairman will have to
26 judge if this is the way that I got to get around her or not?

27 DR. M. KOSTUCH: It depends on how long your question
28 is.



1 MR. K. BLOM: Mr. Cookson, referring back to the
2 question I asked before in terms of solid waste, and I
3 appreciate your answer, and I am not accepting in total what
4 you have to say about that. I am a firm believer that any
5 program that's designed in terms of somebody designing a
6 program, financing, and I think it has to go back to a
7 number years ago. I suggested to you at that time that you
8 can't be a sales manager and a credit manager at the same
9 time, and I believe that is the same token.

10 But anyway, I want to go on a step beyond that, and
11 go to this question of hazardous wastes, and what I want to
12 use right now for a sort of a comparison, if you will,
13 without giving any plugs to the local T.V. station or
14 whatever, there is a W5 program which says W5 being what,
15 it in effect asks the question what it is, why it is, where
16 it is, and who does it being the 5 of W. I think in a lot
17 of the areas related to hazardous wastes you have asked the
18 question and you may have an ample answer as to why it is.
19 You probably receive the answers as to what it is. I think
20 in many questions you have answered the question as to where
21 it is, although at this time I think there are one, two or
22 three areas involved in that particular discussion.

23 I guess my question is, and it relates to this question
24 of who it is. In my experience I think you can have the
25 best castle in the world, the best mountain, or you can have
26 the best whatever, but when it comes right down to it it's
27 all a question of management. I don't think the government



1 at this point in time has said, you know, who is going to
2 operate this thing, and I think that would have an awful
3 lot to deal with, and answer the questions of where, why,
4 who, what. What I'm asking you is this, what is it, or who
5 is it, any way that you look at it that you might see that
6 might operate a facility of this kind?

7 A Ken, we are, as you know, in pretty confidential negotiations
8 at the present time, if you think back to the Environment
9 Council hearings, the recommendations of that panel, I think
10 that they were of a general feeling, I stand corrected on
11 this, Alistair, it's been some time since I looked at the
12 report, but while they did not object totally to private
13 enterprise, they were concerned that there be some kind of
14 a Crown agency that would supervise anything done by private
15 enterprise in this area. Again I stand corrected on their
16 position, and Alistair might like to comment on that, there
17 is two ways to go, total private enterprise, and perhaps
18 environment through the regulations supervise them, or you
19 can say total government build the thing and operate it and
20 so on. The fact is that the public do not trust government
21 and they do not trust private enterprise, so the best
22 compromise here is to have a little of both.

23 So the long and the short is, I think that we are
24 moving towards private enterprise with perhaps Crown agency
25 at arms length from the environment, which would, along with
26 local involvement, supervise and administer.

27 DR. M. KOSTUCH: That is your opportunity on that.



1 MR. K. BLOM: I don't have one comment?

2 DR. M. KOSTUCH: No.

3 MR. K. BLOM: I would like Mr. Cookson's comment
4 on that.

5 DR. M. KOSTUCH: We have other speakers, you can
6 catch Mr. Cookson later, Ken.

7 I do have some comments on the hazardous wastes that
8 if and when Mr. Cookson announces the plan the who, and if
9 it has safety regulations, I have already offered my
10 assistance in trying to help find a location for that plant,
11 and I hope that the other PAC members would also do that.
12 I think it is very essential that we get the hazardous
13 waste treatment plant, or two hazardous waste treatment
14 plants, and I think it is going to take a lot of assistance
15 if we are concerned about the environment, that we will
16 assist on that if we feel that the safety of the plant is
17 there and that the safeguards are there.

18 Terry?

19 DR. T. VEEMAN: I hate to pour cold water on a happy
20 evening, but I guess I have to ask something about water
21 diversion. I suppose I was not surprised by the general
22 conclusions of the late Kroeger report, knowing what Mr.
23 Kroeger has said over the last couple of years, I personally
24 wish he would convince more of us to wear seat belts and
25 twin the Yellowhead highway rather than spend his time
26 irrigating east-central Alberta.

27 However, what did distress me somewhat as a citizen



1 and as an academic was the rather weak intellectual support
2 for diversion and water development and for irrigation
3 expansion that I saw in that report, in part perhaps coming
4 from the committee, but also coming from your department.
5 Two water management problems were outlined, one, there is
6 seasonal problems with flow and the answer is dams regardless
7 of benefits, environmental or economic benefits and costs
8 thereof. Secondly there is water in the north and people
9 and activities in the south, ergo, we move water south, again
10 regardless of the economic and environmental benefits and
11 costs. I suppose my first question would be, do you foresee
12 getting a wider range of expertise and opinion coming to you
13 on these matters within the Department of the Environment,
14 where far too much of your advice is coming from civil
15 engineers?

16 Secondly, it strikes me that I am very pro agriculture
17 and maybe pro moderate development, and I think we have some
18 very challenging opportunities in improving the water used
19 in the existing system and in dry land agriculture, and this
20 could be a problem that could fall between the stools of
21 environment and agriculture given that many of your people
22 are civil engineers, and we are not going to readily convert them
23 into being irrigation engineers. There is some real challenge
24 there, and I fear we may be missing out on those scores.

25 A Good comments, Terry, although I intend to question the
26 comment that was, I think to quote your terms, weak,
27 intellectual support there. The leaked documents, of course,



1 included documents signed by one of my assistant deputies,
2 Peter Melnychuk, and my assessment, personal assessment
3 again, is that that particular person is a very outstanding
4 tremendously capable individual. But you have to keep in
5 mind he was put on that committee primarily for his
6 technical expertise. That he was not a part of the political
7 process that resulted in the report itself. I want to make
8 that distinction, because he is a very highly professional
9 person, and he takes his orders very clearly in that area.

10 I guess, I don't disagree with your comments with
11 regards to what more we can do to dry land farming, and over
12 the question of dams, I know it is a sore point with the
13 Environment Council and especially based on our final
14 decision on the Oldman River. Shortly I have to make again
15 another tough decision in this respect. But one has to keep
16 in mind that it does reflect the seriousness of the limited
17 water supply in the south, and we have such a wide diversity
18 of feeling across the province about this issue that I knew
19 Henry would fly in a hornet's nest. He knew it. It was
20 unfortunately the way the document was leaked. The premier
21 answered very clearly, I think, what the position of the
22 government was with regards to interbasin transfer, and I
23 think has laid it to rest for some time in the future. I
24 hope that is where it is.

25 One other point I wanted to tell you about is that we
26 have in the mill right now a proposal to fund increased,
27 jointly with agriculture, drainage, and I would be interested



1 in comments by our council members on this, because that
2 program will have a pretty heavy impact particularly in
3 the north where we have large areas of agricultural lands
4 that are very subject to flooding and to waterlogging.
5 So where one part of our province has a shortage of water,
6 another part of the province has a tremendous surplus, not
7 just in the rivers, but in the actual agricultural lands
8 itself.

9 MR. M. KOSTUCH: I think you have stimulated some
10 questions on that, and I am going to take Chairman's
11 prerogative and ask a question at this time on the
12 interbasin transfer that has been a concern of mine. A
13 couple of things, I don't think the leaks, I think you should
14 take some time plugging the leaks in your irrigation system,
15 and it would not be necessary then to even consider
16 interbasin transfer. I think leaks from the government
17 should not be necessary, that that information should be
18 publicly available, and to think that information like that
19 had to be leaked is too bad. As far as excess water being
20 in the north, I think you would have the Mayor of Grand
21 Prairie, perhaps, arguing with you about that. I did not
22 get to thank you, but this fellow here represents dam
23 builders in the province, and right now they are in your
24 department, and as far as I know you are the only department
25 of the environment that builds dams. That's a beaver, yes.
26 I was wondering if you would give this fellow to Merv Leitch
27 along with the dam building division of your department.



1 THE HONOURABLE J. COOKSON: I always end up getting a
2 presentation from Martha, I don't know whether there is some
3 significance to that or not.

4 DR. M. KOSTUCH: Graham?

5 MR. G. NORMAN: I am representing the Strathcona
6 Industrial Association, and in 1978 and since that time on
7 numerous occasions both yourself and members of your
8 department have indicated that in your opinion the air shed
9 over the East Edmonton industrial area is at its maximum
10 capacity. Some of our conversations with members of your
11 department, when asked how this statement was arrived at, they
12 indicated that what they did is they took the licence, or
13 the amount of emissions that were allowed by each individual
14 company in each individual component, added those up and
15 assumed that every company would be exceeding these limits,
16 and every company simultaneously. The analyses that we have
17 done would indicate that the actual level is probably something
18 in the order of 12 to 15 percent of the licencees limits.
19 I would just like you to comment on whether you feel this is
20 a good philosophy in coming with compounding statements for
21 the air shed being at its maximum?

22 A Yes, I'm not just clear at how they arrived at that assessment
23 I guess it was before my time in the ministry, you're talking
24 in terms of nitrogen oxides and So₂ and H₂^S and worse. It
25 would just seem to me to be logical that you would work from
26 a premise of what is safe environmentally, and then you would
27 work back to the various industries, and whether that procedure



1 that you have just explained is the same procedure used or
2 not I question. Because I know down in the Joffre area,
3 for example, we have said that a plant can expand provided
4 it does not add to the maximum allowed by the licensee,
5 which we consider safe environmentally. And the most
6 recent, what is it, silent waters, still waters that has
7 just come out by Canada is in a sense dealing with this
8 particular issue where it says that by the turn of the
9 century in the case of SO_2 we should aim for no more
10 emission that we have at the present time. I think we can
11 do that now, and we can do it by reducing the amounts
12 allowable. We have done that with Syncrude which I think is
13 around, well Suncor is around 342 tonne per day at the present
14 time, and Syncrude is around 229 tonne per day, producing half
15 again as much oil. We think, for example, that the new
16 Esso plant if it proceeds will be down as low as 75 tonne per
17 day. And we think on the basis of that and the shutting down
18 of the old plants that we will be able level off and in fact
19 reduce by the turn of the century. That, of course, remains
20 to be seen.

21 Q Just to make it clear, industry is really not complaining
22 about the licence levels, it just seems when you say take
23 for example Imperial Oil and you add up the H_2S and the SO_2
24 and all the rest, and assume that they are exceeding all of
25 those, when added together simultaneously all the industry
26 at the same time, it just seems from a scientific standpoint
27 I can't see the logic or rationale behind it?



1 A This is the industrial complex on the east side of Edmonton,
2 yes.

3 DR. M. KOSTUCH: Let me clarify, that recommendation
4 was that there would be no increase in sulphur dioxide
5 emissions to the year 2000, are you indicating that could
6 be?

7 A That could be, yes.

8 DR. M. KOSTUCH: Good, that is PAC recommendation.
9 We will have one last question.

10 MR. J. LILLEY: Given the statement that the sulphur
11 dioxide levels can be maintained at the level that they are
12 now, what do you see that this may mean in the way of controls
13 on sulphur dioxide, nitrous oxide emissions from the point
14 of thermal planning?

15 A Well I guess that is a gray area that you ask about,
16 because we have already put forward what we think we need
17 in terms of coal. That is a gray area though because we
18 don't know between now and the turn of the century how many
19 coal developments will come on stream. But we have, I agree,
20 and I can't tell you from memory what our position is
21 insofar as So₂ emissions on new plants for coal. But I
22 can say this that they are generally the standards that
23 Canada has considered necessary.

24 Now again we are in a negotiable stage here, but that
25 is the position we take. I still have to face my colleagues
26 on that point, but that is the position we want to take on
27 that. So, well, we just hope that, I guess its a trade off



1 insofar as tar sands and coal development both for power
2 and for other purposes. But there are some other really
3 damaging, potential damaging factors on the tar sands.
4 Whether they are greater or lesser than coal development,
5 I guess remains to be seen. I'm hoping in terms of
6 environmental problems, and I think my colleagues support
7 this, that any coal developments certainly when one thinks
8 about coal power for export, that there be no coal
9 developments on agricultural land. If we run short of
10 power, that would be the last move that we would make if
11 we had to develop coal, the last move would be to move on
12 to good agricultural land.

13 There is another interesting side light about that,
14 that might be of interest to the members here. We do not
15 know now what position we are in as far as interprovincial
16 grid with Manitoba. There has been a recent election in
17 Manitoba, as you know, there has been a change of government,
18 and I think that time will, well it will have to shake out as to
19 whether the new government will be supportive of that
20 interprovincial. If we could move on the interprovincial,
21 we can minimize some of our own environmental concerns as to
22 possible dam construction and coal development. But that's
23 a gray area out there now.

24 DR. M. KOSTUCH: Thank you, PAC would be willing to
25 give their help as much as they can on the control of
26 sulphur dioxide emissions.

27 Did you notice I didn't ask any questions on the
28 Odyssey or anything like that? I will now call on Ron to



1 give a thank you.

2 MR. R. WHISTANCE-SMITH: I guess it would be
3 appropriate after Mr. Cookson mentioned the recent election
4 in Manitoba to note that the government was defeated very
5 largely on environmental and social services issues.

6 It gives me great pleasure to give this thank you
7 tonight. I think we have heard a lot of things that have
8 pleased us very greatly. I did want to also take note of
9 the fact, Mr. Minister, that you may have noticed Ken Nelson
10 slipped out earlier, he was out looking for the band, he
11 couldn't quite figure out what had happened.

12 I think something very interesting happened during the
13 question and answer period. I asked questions about the
14 petro-chemical plant going north here, and the minister
15 answered in what might have been a cautionary, positive
16 note, and Judy immediately backed it up at that, and I can
17 understand that. I wanted to just share with you something
18 that I was reading very recently, and it is that a lack of
19 information sparks fear in people, and fear begets anger.
20 Information can allay fear which will quiet the anger, but
21 the information must be accurate and it must be freely
22 available. You will find that one of the resolutions we
23 passed this year is aimed just along those lines.

24 Mr. Minister, thank you very much for what you had to
25 say tonight, it was a most informative and straight forward
26 presentation. And now to surprise all of you, the minister
27 has agreed to do something for PAC which he has not done



1 before. Martha is constantly making presentations to the
2 minister, and I would now like to call on the Honourable
3 Jack Cookson to make a presentation on behalf of PAC.

4 THE HONOURABLE J. COOKSON: I just wanted to assure
5 you, Martha, that what is in here is not the \$2 that I
6 collected for that Odyssey hearing. I got one from Martha
7 and I got one from somebody else, but it is a token of,
8 how should we say this, it's to help balance the books a
9 little bit. What I got last year, I want Martha to open
10 this up, and don't tear the paper because Christmas is
11 coming, and wear it.

12 DR. M. KOSTUCH: Thank you, Mr. Cookson.
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APPENDICES



AGENDA
FOR THE ANNUAL JOINT MEETING

**ELEVENTH ANNUAL JOINT MEETING OF THE
PUBLIC ADVISORY COMMITTEE ON THE ENVIRONMENT
AND THE ENVIRONMENT COUNCIL OF ALBERTA**

3, 4, 5 December, 1981

Grande Prairie Motor Inn, Grande Prairie, Alberta

THEME: Options For The Future

Chairman	Time	Activity	Speaker
Thursday, December 3			
	2:00 pm	Aircraft departure from Lethbridge Airport	
	4:00 pm	Aircraft departure from Calgary Airport	
	4:30 pm	Aircraft departure from Edmonton Industrial Airport	
		Private Dinner Arrangements	
	8:00 pm	Registration	
Mr. Ron Whistance-Smith	8:30 pm	Film: "No Act of God"	
	9:30 pm	No Host Bar and Ice Breaker	
Friday, December 4			
Mrs. Betty Hunter	8:30 am	Official Opening	
		PAC Chairman's Remarks	Dr. Martha Kostuch
		Welcome from the City of Grande Prairie	Mr. Hugh Impey
		Welcome from the Environment Council of Alberta	Mr. Alistair D. Crerar
Mrs. Betty Hunter	9:00 am	Introduction to the Region	Mr. John Jarvie
Mrs. Betty Hunter	9:30 am	Development Potential for the Peace Country	Mr. John Shannon
	10:00 am	Refreshment Break	
Mrs. Betty Hunter	10:15 am	Acidification of Soils and its Connection with Loss of Productivity	Mrs. Judy Roschlaub
Mrs. Betty Hunter	11:00 am	Impact of Acidification of Lakes and Rivers on Biota	Dr. Joan Snyder
Mrs. Betty Hunter	11:45 am	Report from the Panel on Hazardous Waste Management	Mr. Alistair D. Crerar
Dr. Martha Kostuch	12:00 noon	Lunch	
		Introduction of Guest Speaker	Mr. Bill Flook

Chairman	Time	Activity	Speaker
		Future of Agriculture in the Peace River Country	Dr. Fred Bentley
		In Appreciation	Dr. Terry S. Veeman
Mr. Ron Whistance-Smith	1:30 pm	Roadside Ditch Erosion	Mr. Jerry Lickacz
Mr. Ron Whistance-Smith	2:15 pm	Destroying an Irreplaceable Heritage (Vegetation Control in Roadside Ditches)	Mr. Pat Seymour
	3:00 pm	Refreshment Break	
Mr. Bob Richardson	3:15 pm	Resolutions	
	5:00 pm	Adjournment	
		Private Dinner Arrangements	
Mr. Pat Seymour	7:30 pm	Alternative Outdoor Recreation Environments for the Future	Dr. Guy Swinnerton
	8:30 pm	Film - "The Disappearing Land"	
	9:30 pm	Discussion Period and Refreshments	
Saturday, December 5			
Dr. Martha Kostuch	9:00 am	Chairmen's and Committee Reports	
Mr. Bob Richardson	9:30 am	Resolutions	
	10:15 am	Refreshment Break	
Mr. Terry Shewchuk	10:30 am	The Need for More Gas Exploration	Mr. Paul C. Jackson
Dr. Martha Kostuch	12:00 Noon	Lunch	Mr. Alistair D. Crerar
		In Appreciation	Mr. Bill Batycky
Mrs. Betty Hunter	1:30 pm	Report from the Nominations Committee	
		Candidates' Forum	
		Election	
Dr. Martha Kostuch	2:00 pm	Study Group Chairmen's Reports	
Mr. Bob Richardson	2:30 pm	Restructuring of PAC	
	3:00 pm	Refreshment Break	

Chairman	Time	Activity	Speaker
Dr. Guy Swinnerton	3:30 pm	"Planning for Resource Communities in a Booming Economy"	Dr. Don Detomasi
	5:00 pm	Adjournment	
	7:00 pm	Happy Half Hour	
Dr. Martha Kostuch	7:30 pm	Banquet	Mr. Alistair D. Crerar The Hon. Jack Cookson Mr. Ron Whistance-Smith
		Introduction of Guest Speaker	
		In Appreciation	
Sunday, December 6			
		Private Breakfast Arrangements	
	9:00 am	Departure by Chartered Aircraft	

RESOLUTIONS

Resolution 1

I. Use of Poisons for Predator Control

II. Be It Resolved:

THAT the Government of Alberta eliminate the use of sodium monofluoro-acetate (compound 1080) for control of problem predators and more strictly regulate the supply of, and scrutinize requests for, other poisons for this purpose under The Agricultural Pests Act, 1974.

III. Background:

Compound 1080 has been used primarily for poisoning coyotes and wolves in Alberta. It has several undesirable features which led the United States Government to ban its use. These include its persistence through several steps in the food chain, so that not only the coyotes and wolves are poisoned but also ravens, magpies, eagles, and owls which feed on the carcasses of the coyotes and wolves. Skunks, mink and other furbearers may then become further victims through feeding on the secondary bird victims. Because compound 1080 is slow acting, animals which have eaten the baits may disperse a considerable distance before dying and most of their carcasses are not retrieved. Thus they remain available for scavengers. For a detailed summary of the properties of compound 1080, see Henderson and Boggers (3).

A recent report entitled *Coyote Control in Alberta* (2) documents that disproportionate quantities of poisons have been supplied to landowners during fall and early winter, when the least coyote problems are experienced. Preventive action against calf predation is not effective so early, but should be deferred until within a month of calving since new coyotes soon move into vacant territory. It can only be suspected that poison baits supplied for the alleged purpose of controlling problem coyotes (under the terms of The Agricultural Pests Act, 1974) are being set for the purpose of obtaining pelts, which are most valuable in fall and early winter.

While the use of poisons in Alberta has been much reduced from previous levels, it still greatly exceeds that in other western Canadian provinces according to 1979 statistics (over 8000 poison baits put out by Alberta Agriculture, compared with 75 in Manitoba, 21 in Saskatchewan and none in British Columbia). (Sources of information: Dorrance (2) for Alberta; for other provinces, quotations from provincial government officials in the leaflet *Who is Poisoning Our Coyotes?* circulated by Coyote Concern.)

Further reduction in usage could be achieved if poisons were only supplied for the removal of problem animals from private land and requests for poison baits during the fall and early winter were subjected to special scrutiny.

IV. References:

1. Bourne, J.B. 1978. *Annual progress report on the predator damage control program for the period January 1 to December 31, 1977*. Alberta Department of Agriculture. 12 pages. PAC Library.
2. Dorrance, M.J. 1980. *Coyote Control in Alberta*. Plant Industry Laboratory, Alberta Department of Agriculture. 25 pages. PAC Library.
3. Henderson, F.R. and E.V. Boggess. 1970. *Prevention and Control of Wildlife Damage*. Kansas State University, Manhattan, Kansas. PAC Library. See pages 324-1/3.

V. To be Directed to:

Minister of Agriculture
Associate Minister of Public Lands and Wildlife

Copy for information to:

Minister of Environment

VI. Proposed by the Environment Protection Study Group

Resolution 2

I. Private Land for Recreation

II. Be It Resolved:

THAT the Government of Alberta should encourage and support the use of landowner agreements and tax incentives as alternatives to the fee-simple acquisition of land for public outdoor recreation open space and for enabling public access to private land for recreation.

III. Background:

In January 1976 the Alberta Land Use Forum in its Report and Recommendations (1) noted that the demand for open space for outdoor recreation was increasing and that all of this demand could not be accommodated solely on Crown lands. The Land Use Forum also recognized the role of private rural land as part of the total land supply for recreation, but at the same time expressed concern that it was becoming more difficult to locate accessible agricultural land for recreation particularly in relatively close proximity to the larger urban centres.

During the subsequent five years a number of dynamic factors both in terms of demand (population growth, discretionary time, income and life style) for open space and supply (increasingly competitive land-use patterns particularly around major urban centres) have compounded the problem. Moreover, there is every indication that these trends will continue and exacerbate the situation still further.

Although in the past provision for outdoor recreation has been largely met through the establishment of parks on Crown land and the fee-simple approach to land acquisition, the limited availability of appropriate Crown land near large urban centres and the escalating land costs make reliance on these approaches an increasingly precarious policy to follow. In addition, although privately held lands are ideally located to complement the recreation opportunities in parks and other public lands, the benevolent landowner who allows public access on his land is likely to become increasingly reluctant to permit such access because of the growing numbers of people involved and the unclear legal implications of liability and compensation associated with public use.

At present there are few incentives for the private landowner to tolerate let alone encourage public access and recreation. There is therefore a growing need for programs that facilitate the recreational use of private land while respecting the rights and privileges of the landowner and the need for society to compensate, where necessary, landowners for the costs incurred and/or benefits foregone as a result of the public's

presence on private land. Such provision would need to be supported by an appropriate education program in order to make the general public aware of acceptable behavior norms with respect to the use of private land and the effect of their presence on efficient and normal farming practices.

A number of provinces in Canada, most notably Ontario (2) and Nova Scotia, are giving substantial consideration to the use of private land for recreation without penalizing or inconveniencing the landowner. Outside Canada, existing practices in England and Wales afford useful guidelines of the types of financial and legal arrangements and mechanisms for preserving the recreation and amenity value of farmland and permitting public access to these areas.

IV. References:

1. Alberta Land Use Forum. 1976. *Land Use Forum Report and Recommendations*. Edmonton: Alberta Land Use Forum. 280 pages.
2. Ontario Institute for Studies in Education. 1975. *Private Land, Public Recreation and the Law*. Toronto: The Conservation Council of Ontario. 55 pages.
3. Cullington, J. 1980. "Attitudes to the Promotion of Private Land for Recreation." In *Geographical Inter-University Resource Management Seminars*, 10:1-24. Waterloo: Department of Geography, Wilfrid Laurier University.
4. Ontario, Ministry of the Attorney General. 1980. *Property Protection and Outdoor Opportunities: A Guide to the Occupiers' Liability Act, 1980 and The Trespass to Property Act, 1980*. 12 pages.
5. Ontario Provincial Parks Council. 1977. *Third Annual Report*. Ontario Ministry of Natural Resources. 23 pages.
6. Swinnerton, G.S. 1981. "Recreational Access to Private Land: Alternative Land Use Patterns - the British Experience." Paper prepared for the Environment Protection Study Group, Public Advisory Committee, Environment Council of Alberta, Edmonton. 43 pages.

V. To be Directed to:

Minister of Agriculture
Alberta Research Council

Copies for information to:

The Premier
Members of the Cabinet

VI. Proposed by the Environment Protection Study Group

Resolution 3

I. Agricultural Research in Alberta

II. Be It Resolved:

THAT the Alberta Government provide for the long-term financial support for stability of the extramural agricultural research effort in Alberta; and

THAT Provincial financial support for basic research in agriculture be expanded.

III. Background:

Stability of the human environment in Alberta depends in the long term upon the stability and continued efficiency of agriculture. The fragmented structure of this industry makes it heavily dependent upon public institutions for the conduct of research and the dissemination of the results of research. Traditionally the primary responsibility for agricultural research in Canada has been assumed by the federal government, but the budgetary problems of the last decade have led to continual cutbacks in the staffing of federal laboratories and in the funding of research from federal sources (in real terms). For instance, the number of entomologists employed by the Research Branch of Agriculture Canada declined from 200 in 1971 to 140 in 1975 and is even lower today (3). While targets for progressively increasing research expenditures in Canada have recently been announced, there is serious doubt whether these will be met in face of rising inflation and continuing federal budgetary deficits.

In these circumstances the Alberta Government in 1977 established the Farming for the Future program, with an initial funding commitment of \$10 million over five years. Subsequently a further \$15 million has been added and the program extended by two years to 1984. The program has provided long overdue funds for many applied research projects, but has not addressed the long-term question in need of decision; that is, whether the provincial government intends to support a major agricultural research effort in the long term. The time limit on funding under the present program makes it difficult for institutions to attract the best qualified staff by offering security of employment. Nor does the program offer any incentive for young Albertans to take up a research career, since it does not address the problem of non-availability of permanent positions after graduation.

A comprehensive agricultural research program for Alberta should include funding of basic research disciplines not presently supported by the Farming for the Future program, which has been used mainly to support production-oriented projects with an obvious immediate payoff. While the published terms of reference (1) appear relatively broad, referring to "studies having the potential to lead to increased agricultural productivity and improve the long-term viability of agriculture in Alberta," we understand that supplementary directives are issued to the program committees which force

them to reject some basic research projects of considerable importance as outside the terms of reference. An example of important research work experiencing funding difficulties is the long-term work on soil fertility conducted by the University of Alberta on the Breton Plots. Another example is work on the systematics and biology of flies of agricultural importance conducted at the Department of Entomology, University of Alberta. This reluctance to fund many fields of basic research under the Farming for the Future program, presumably because they are regarded as a federal responsibility, needs reappraisal in the light of the continued inadequacy of federal efforts. A comprehensive long-term agricultural research program for Alberta should include a balance of support for both basic and applied projects.

A possible model for long-term support for agricultural research is the endowment from the Heritage Savings Trust Fund provided for medical research. This mechanism has the advantage of insulating research institutions from sudden changes in funding levels, thus allowing them to plan ahead and offer security of employment.

IV. References:

1. Farming for the Future. 1979. "Terms of Reference." Agricultural Research Council of Alberta. 2 pages.
2. Farming for the Future. 1980. *Progress Report 1980*. Agricultural Research Council of Alberta. 32 pages.
3. *Entomological Society of Canada Bulletin*. "Report of the President." Vol. 77, No. 4, December 1979.
4. *Entomological Society of Canada Bulletin*. Vol. 13, No. 1, March 1981.

V. To be Directed to:

Minister of Agriculture
Minister of Recreation and Parks
Minister of Tourism and Small Business

Copies for information to:

Minister of Energy and Natural Resources
Minister of Environment

VI. Proposed by the Environment Protection Study Group

Resolution 4

I. Secrecy in Environmental Affairs

II. Be It Resolved:

THAT the Alberta Government take legislative and administrative measures to ensure that public notice concerning accidental or unauthorized spills and releases of harmful substances is given through the media and that public access to all relevant information is provided.

III. Background:

Recently the Government of Alberta has been criticized for unjustified secrecy in environmental affairs (for instance, in the *Edmonton Journal* on 14th and 15th of May). The specific incidents raised at that time were:

- a) the holding of a closed ERCB hearing into a spill of 40,000 barrels of oil in December, 1980, into Sweathouse Creek, a tributary of the Little Smoky River, without the public or local municipal officials being informed; and
- b) the failure of the Department of Environment to inform the public of PCB spills in 1974 and 1978 which could have endangered the communities of Watino and Peace River.

It used to be a stated policy of a former Minister of Environment, Hon. William Yurko, that "there are no environmental secrets in Alberta." The incidents listed above suggest that this policy has become eroded and needs to be reaffirmed at Cabinet level. The public should have a right to be informed of any major spills or releases of contaminants which present a possible hazard to public health or are detrimental to public lands or resources. The Hazardous Spills Summary presently published by Alberta Environment provides only summarized statistical information.

The Clean Air (General) Regulations and Clean Water (General) Regulations spell out requirements for operators of plants to notify the Department of Environment of accidental or unauthorized spills or releases, but do not require public disclosure by the department of the information so received. In this circumstance it is to be expected that officials will be inclined to treat such information as confidential unless directed otherwise. The need for specific sections in the regulations regarding release of information should be reviewed.

Regulations under The Oil and Gas Conservation Act spell out requirements for the reporting of spills and unauthorized releases to the Energy Resources Conservation Board and the Department of Environment, except in the case of spills from pipelines which must be reported to the board only. Again, no specific requirements on public

disclosure of the information so received are included, this being left entirely to administrative discretion. Rules of practice for the Energy Resources Conservation Board are laid down by Alberta Regulation 149/71, which requires the board to publish notice of all hearings on applications to the board and to disclose all material submitted in relation to applications. However, these disclosure requirements do not seem to apply to "hearings called by the board on its own motion," and this is the category into which spill inquiries presumably fall. In the case of the Sweathouse Creek incident, board officials were quoted as saying that their hearing was held in camera because "there was no danger to the public." There appears to be no statutory basis for applying a criterion of this kind to disclosure of information, and, in any case, if one of the purposes of hearings is to determine possible danger to the public or public resources, the absence of such danger should not be assumed in advance of the hearing. It is within the powers of the board to establish by regulation specific rules of practice for inquiries into spills, as it has done for hearings on applications. Such rules should require public notice of the hearing in all cases where the spill may have endangered public health or damaged public lands and resources, and should allow municipalities and public interest groups to intervene on behalf of the public interest.

Spills resulting from highway accidents come to the notice of the police through the requirement for written reports on all accidents resulting in injury or death to a person or property damage in excess of \$350.00 (The Motor Vehicle Administration Act, Part 6). These reports are made to the Registrar of the Motor Vehicle Branch of the Department of the Solicitor General, but the Act does not contain any requirements for the release or non-release of the information in accident reports, nor does it specify when inquiries should be held into accidents. Presumably all such matters are open to administrative discretion.

The minister responsible for Disaster Services receives reports on major spills and releases which have required their attention, and this role could be strengthened if Bill 80 receives final passage.

Omissions in the report on spills tabled in the Legislature on December 2nd, however, appear to indicate a need for improved interdepartmental communications and reporting of these incidents.

The Minister of Social Services and Community Health may receive information on the possible effects of spills and releases on public health, but The Public Health Act does not require him to release such information. Presumably such matters are subject to administrative discretion and need not ever be made public.

IV. References:

Braid, D. 1981. "It's a long list - those incidents kept from the public." *Edmonton Journal* 14th May 1981.

Braid, D. 1981. "Too many departments have their noses in environment." *Edmonton Journal* 15th May 1981.

Clean Water (General) Regulations. Office Consolidation (AR 35/73 with amendments up to and including AR 201/77).

Clean Air (General) Regulations. Office Consolidation (AR 216/75 with amendments up to and including AR 88/78).

Rules of Practice of the Energy Resources Conservation Board, AR 149/71.

The Oil and Gas Conservation Act, Regulations. Section 8 (Control of Spills). AR 151/71, AR 69/72, AR 144/74, AR 2/76, AR 179/76, AR 229/79.

Bill 80 - Transportation of Dangerous Goods Control Act.

The Motor Vehicle Administration Act. Office Consolidation (Chapter 68 of the Statutes of Alberta, 1975, with amendments up to and including November 16th, 1979).

The Public Health Act. Office Consolidation (Chapter 294 of the Revised Statutes of Alberta, 1970 with amendments up to and including July 4th, 1979).

V. To be Directed to:

The Premier
Minister of Environment
Solicitor General
Chairman, Energy Resources Conservation Board
Minister of Municipal Affairs
Minister of Social Services and Community Health
Minister of Energy and Natural Resources

Copies to:

All MLAs

VI. Proposed by the Environment Protection Study Group

Resolution 5

I. Precise Definitions for Land Classes in Alberta

II. Be It Resolved:

THAT the Government of Alberta establish specific, detailed definitions for prime, good and poor agricultural land in terms of the CLI agricultural capability scale for uniform usage in all appropriate land use legislation in Alberta.

III. Background:

The adoption of a formal provincial policy on the preservation of productive farmlands is long overdue. Such a commitment would certainly assist regional planning commissions in making agricultural land use policies more effective, more uniform and more consistent with the long-range custodianship objectives of this vital resource.

Before any reasonable management policy can be established it is absolutely imperative that specific, detailed definitions of land classes be established so that all legislators and land use administrators have a clear and legally enforceable basis of understanding. This might be done by reference to specific CLI classifications.

At the present moment the regional planning commission policies reflect wide definition problems concerning what is meant by "prime", "good", or "poor" agricultural land. Significant differences of interpretation exist on these terms. Different regional characteristics and perceptions of the value of land are reflected in the various land use policies of each regional planning commission.

If we are ever to establish a technically sound plan for land use management in Alberta, or to provide clarity and uniformity in policies of the regional planning commissions or in The Planning Act, 1977, precise meaning of land classes is urgently needed. The provincial government must accept its leadership responsibility by providing specific, detailed definitions of each land classification for uniform usage in all land use legislation in Alberta.

IV. References:

1. Alberta Municipal Affairs. 1978. *Regional Policies on Conversion of Agricultural Land to Other Uses*. Inter-Agency Planning Branch, Alberta Department of Municipal Affairs. PAC Library.

V. To be Directed to:

Minister of Agriculture

Copies for information to:

Minister of Environment

VI. Proposed by the Non-Renewable Resources Study Group

Resolution 6

I. Uses of Class 1, 2, and 3 Lands in Alberta

II. Be It Resolved:

THAT the Government of Alberta enact legislation to restrict the use of CLI agricultural capability Class 1, 2, and 3 lands to uses which will not reduce their future agricultural capability. This restriction to be included immediately as prescriptive policy in all "regional plans" and "Municipal Bylaws," and rigidly adhered to unless permission for an alternative use is granted by a designated provincial-level authority after holding suitable public hearings.

III. Background:

The Planning Act, 1977 is a very commendable piece of legislation allowing for a maximum of local autonomy and minimum of exemptions. This Act makes it mandatory for every regional planning commission to prepare and adopt a "regional plan" by December 31, 1982 (Sec. 45 (1)). The Act also makes it mandatory that every land use bylaw of a municipality be in conformity with the regional plan. Since the Minister of Municipal Affairs conducts a review of each regional plan, he is in a position to exercise his many powers in the public interest before giving final approval to the plan.

The Act also permits the Lieutenant-Governor in Council to make regulations for controlling any development within the province. Action in accordance with this legislative power is now needed.

Alberta is now developing at a tremendous rate and Class 1, 2, and 3 lands, which are vital to the food production capability of this nation, are being taken out of agricultural production at a regrettable rate. The depletion of the Niagara Peninsula farmlands is an excellent example of what can happen without responsible provincial custodianship over productive soils. The Province of B.C. is to be commended for its action to preserve the fertile Fraser River Valley land. Since the most productive land in Alberta is now being populated and industrialized at a tremendous rate, it is imperative that our provincial government provide more effective leadership in matters of land use policy.

Less than 8 percent of all land in Canada and only 9.7 percent of Alberta's land area is suitable for cereal production and for practical purposes all Class 1, 2, and 3 lands are already in use. Food produced on higher quality soils costs less to produce and this low unit cost, plus the greater productive capacity of Class 1, 2, and 3 soils, can provide an export potential for agricultural products long after our petroleum resources have been diminished.

Class 1, 2, and 3 lands are a public resource that future generations will depend upon. Such soils must not be consumed by industry, by urban expansion, or to enhance the tax base of municipalities without a very careful assessment of the long-range effects of removing such premium lands from food production.

In the public interest, conversion of these premium agricultural lands to other uses must be brought under control. It is no longer satisfactory to leave this to local government officials. Binding provincial legislation and regulations are urgently needed to preserve this valuable public resource.

IV. References:

1. Alberta Planning Board. 1981. "Rural Industrial Land Use Policy Guidelines for the 1980s." PAC Library.
2. Thompson, P.S. "Security of the Agricultural Land Base." Presentation to the Non-Renewable Resources Study Group of the Public Advisory Committee. PAC Library.
3. Bentley, C.F. 1980. "The Disappearing Land." *Agrologist* Fall 1980.
4. Unifarm. 1981. *Land Use*. PAC Library.

V. To be Directed to:

Minister of Municipal Affairs
Minister of Agriculture
Minister of Energy and Natural Resources

Copies for information to:

Minister of Environment

VI. Proposed by the Non-Renewable Resources Study Group

Resolution 7

I. Specifically Designed Taxicabs

II. Be It Resolved:

THAT the Government of Alberta and the Department of Consumer and Corporate Affairs investigate and pursue the possibility of establishing a plant, preferably in Alberta, to produce more efficient, economical, convenient and minimally polluting vehicles for use as taxicabs.

III. Background:

With few exceptions, taxi companies in Canada use private passenger automobiles for conveying fare-paying passengers. The characteristics of these vehicles are far from ideal for use as taxicabs for the following reasons:

- a) Fuel consumption and pollution output are needlessly high.
- b) Vehicle weight is increased and useful baggage space decreased by configurations aimed at capturing the appeal of the domestic buyer with notions of prestige, power, acceleration, sexual allure, etc.
- c) Such vehicles are not designed to accommodate disabled people with equipment such as wheelchairs.

Taxicab companies might be willing to purchase use-designed taxicabs provided that operating costs were at least competitive with those cars presently used. Action taken by the Alberta Government to promote the production of a made-in-Canada, designed-in-Canada taxicab could have positive results in terms of conservation, reduction of pollution, and employment.

A suitable vehicle could be designed and assembled in Alberta utilizing engines and transmissions now in production so that production of these, the most sophisticated part of automobile manufacture, would initially, at least, be unnecessary. This procedure is already being used with complete success for the manufacture of trucks by such companies as Kenworth and Western Star in B.C.

The availability of such a use-designed, compact taxicab would not necessarily eliminate the traditional full-sized taxi, but the economies and flexibilities of choice should be made available to the consuming public.

IV. References:

- 1. G.S.M. Taxi Ltd. Brochure.

V. To be Directed to:

Minister of Consumer and Corporate Affairs

Copy for information to:

Minister of Environment

VI. Proposed by the Non-Renewable Resources and Energy Conservation Study Groups

Resolution 8

I. Utilization of Sewage Effluent

II. Be It Resolved:

THAT the Department of Environment should develop a policy and a special grant program to encourage municipalities to utilize their sewage effluent.

III. Background:

Sewage is a valuable resource. The organic matter and nutrients in sewage should be recycled. Conventional sewage treatment and disposal not only wastes this valuable resource but decreases the water quality of the receiving waterbodies. Thus, utilization of sewage effluent serves two purposes: valuable nutrients are recycled and water quality is improved.

"There is little doubt that Edmonton's sewage is the most important factor in the deterioration of water quality in the North Saskatchewan River"(1). "In the Bow River also, the combination of sewage discharges and river flow is the prime determinant of downstream water quality"(2). "In simple terms, this means that the water quality in the four most urbanized rivers in Alberta downstream of the major centres is determined by how much sewage is discharged and how much water is available to dilute it"(3). These quotes come from a report on the quality of the Oldman, Bow, Red Deer and North Saskatchewan Rivers. That the quality of these rivers is affected to this degree by sewage is clearly unsatisfactory.

Heavy metal contamination of sewage is frequently used as an argument against sewage utilization. This argument is not valid since sewage effluents contaminated with heavy metals should not be disposed of in water bodies either. Industries should be required to remove any heavy metals before being allowed to dump their wastes into the municipal sewage system. Heavy metal contamination of lakes and rivers is no more acceptable than heavy metal contamination of land.

IV. References:

1. Reynoldson, T.B. 1974. *Macrobenthic Fauna Surveys, Oldman River, Bow River, Red Deer River, North Saskatchewan River*. Pollution Control Division, Alberta Department of Environment. 32 pages. See page 11.
2. Ibid. See page 9.
3. Ibid. See page 13.

4. Alberta Environment. 1977. *A Practical Guide to Municipal Wastewater Irrigation*. Earth Sciences and Licensing Division, Alberta Department of Environment. 17 pages.
5. Alberta Environment. 1979. *Policy Document on Land Application of Municipal Wastewaters in Alberta*. Standards and Approvals Division, Alberta Department of Environment. 8 pages.

V. To be Directed to:

Minister of Environment

Copies to:

Minister of Municipal Affairs

Minister of Agriculture

Minister of Energy and Natural Resources

Associate Minister of Public Lands and Wildlife

Minister of Social Services and Community Health

VI. Proposed by the Pollution Study Group

Resolution 9

I. Private Sewage Disposal Systems

II. Be It Resolved:

THAT the responsibility for private sewage disposal systems be transferred from the Department of Labour to the Department of Social Services and Community Health, and

THAT all decisions related to approval of type of system, inspection of installation, testing, and permitting of private sewage disposal systems be handled by the local health authorities.

III. Background:

It is essential that a high priority be given to environmental health when making decisions related to private sewage disposal systems. This is more likely to happen if the responsibility for private sewage systems is under the Department of Social Services and Community Health.

Approximately twelve years ago, the plumbing inspection service was transferred from the Department of Public Health to the Department of Labour due to a change in government policy. Responsibility for administering The Plumbing and Drainage Act and regulations made thereunder was likewise changed over to the Department of Labour. Permits and plans are approved by the Plumbing Inspection Branch. This information is not always communicated to local units and their inspectors. When a health nuisance or health hazard occurs, the public health inspectors are called upon to correct the deficiency. The health inspectors, not knowing all the factors relating to the private sewage system they are called to look at, such as location of all parts of the system, type of equipment, capacity, whether a permit was issued, if inspected at any time during construction, soil percolation, and subsoil composition, are at a disadvantage to provide a solution.

The resource and research capabilities of the Department of Environment and the Department of Labour should be made available to assist local boards of health.

Private sewage disposal installation in Saskatchewan and British Columbia is governed by health legislation, and comes directly under the supervision of the Public Health Inspectors.

Training of the Public Health Inspectors at the British Columbia Institute of Technology is directed towards provision of expertise in this area.

Major environmental health problems continue to exist and are being created daily as a result of inadequate private sewage disposal in Alberta. These problems are the result of a variety of situations including inadequate planning control, inadequate facility installation, faulty installation, systems installed without permit and/or inspection and approval, negligence in care and maintenance by those using these systems, overuse of systems beyond their original design capacities, and a distinct lack of co-ordination between those agencies of government which share legislative responsibility in this particular area of public health protection and regulation.

IV. References:

1. Resolutions of the Public Advisory Committee
 - a) 3.5.3.4 - "Rural Sewage Installation," 1973
 - b) "Sewage Effluent in Small Communities," 1975
 - c) "Public Health Inspectors," 1980
2. Pollution Study Group of the Public Advisory Committee on the Environment. 1975. *A Survey of Improper Sewage Disposal on the Land Surface in Alberta*. Edmonton: Environment Council of Alberta. 67 pages.
3. Pollution Study Group of the Public Advisory Committee on the Environment. 1974. *Recommendations from the Report on the Sewage Questionnaire by the Pollution Study Group*. 11 pages. PAC Library.
4. Resolution submitted by the Leduc-Strathcona Health Unit to the annual meeting of the Health Unit Association of Alberta, November, 1980

V. To be Directed to:

Minister of Environment
 Minister of Labour
 Minister of Social Services and Community Health
 Minister of Municipal Affairs
 Minister of Agriculture

VI. Proposed by the Pollution Study Group

Resolution 10

I. Air Pollution

II. Be It Resolved:

THAT the Government of Alberta appoint a special select committee of the legislature to hold public hearings and make recommendations on the control of air pollution.

III. Background:

According to a public opinion survey commissioned by the Environment Council of Alberta, 56 percent of Albertans believe that the provincial government is not doing a good job in protecting the environment (1). Fourteen percent of Alberta's residents believe they live in environments that are hazardous to their health. The majority of the people concerned about their health mentioned air pollution as the cause of their concern (2).

In November of 1980, the Pollution Study Group wrote letters to the editors of many of the province's newspapers asking people concerned about industrial air emissions to write to the Pollution Study Group and explain their concerns. Replies were received from many areas of the province. Concerns included general impact on the environment, and the effects of air pollution on agricultural crops and on animal and human health.

People are becoming increasingly concerned about the number of violations of The Clean Air Act by many of Alberta's industries (Syncrude, Suncor, Diamond Shamrock and Dow Chemical). The Department of Environment is either unwilling or unable to enforce their regulations.

Although the normal procedure is to request the ECA to hold public hearings, the problem is considered to be of sufficient seriousness that a select committee of the legislature would more readily convince the general public of the magnitude of the problem.

A special select committee would be able to determine what concerns the people of Alberta have about air pollution. The committee should be requested to make recommendations on all aspects of air pollution including legislation, regulations, and enforcement. The recommendations of a legislative committee would have a good chance of being acted on.

IV. References:

1. Kelly, M. 1981. *Highlights of the MIR Survey Excluding Respondents With No Opinions*. PAC Library.

2. MIR Information Research Ltd. 1981. *Public Perceptions of the Environment in Alberta*. Edmonton: Environment Council of Alberta. 33 pages plus appendix.

V. To be Directed to:

Premier
All Members of the Cabinet

Copies to:

Energy Resources Conservation Board
All MLAs

VI. Proposed by the Pollution Study Group

Resolution 11

I. Flaring from Sulphur Extraction Gas Plants

II. Be It Resolved:

THAT the recommendations from the 1972 Environment Conservation Authority Public Hearings into the Environmental Effects of the Operation of Sulphur Extraction Gas Plants regarding flaring (recommendations under sections 4.3.1 and 4.4.2) be implemented by Alberta Environment and the Energy Resources Conservation Board.

III. Background:

The Public Advisory Committee is concerned about the effects of flaring from sour gas plants on the environment and on human and animal health. We feel that it is important that the recommendations made in 1972 regarding flaring be fully implemented.

The following recommendations appear under section 4.3.1 Stacks and Flares:

- 1) THAT measurements of ground level concentrations of sulphur gas from sour gas plants be designed in such a manner as to be directly co-related with plant practices and weather conditions.
- 2) THAT effects of ground level concentrations be related to immediate effects, such as noticed by people, as well as to longer term effects on vegetation and animals.
- 3) THAT information be gathered as soon as possible, through appropriate investigations, to develop a total documentation of sulphur emissions, not only for normal plant operations, but also for plant upsets.

The following recommendations appear under section 4.4.2 Field Flaring:

- 1) THAT the further unitization of the flare systems of sour gas fields be encouraged in order to keep the number of flare stacks to a minimum.
- 2) THAT the technology of flame lighting and maintaining the flame in flare stacks be improved to prevent flame burnout.
- 3) THAT reliable automatic re-ignition systems be a requirement of all stack systems.
- 4) THAT improvements be made in the design of flare stacks in order to achieve improved combustion efficiency under all operating conditions and minimize

the incidence of flame-out, and that they be monitored regularly to ascertain that combustion is complete.

- 5) THAT improved surveillance methods be instituted for flare stacks operating at well and battery sites or other remote locations so that abnormalities can be promptly detected by the responsible party.
- 6) THAT adequate, all-weather access roads or other access devices be installed to provide quick access for maintenance personnel and equipment to all flare stacks.

It is realized that some of these recommendations may have been partially implemented during the intervening period. What this committee seeks however, is prompt and full implementation using the latest technology available, so that real improvements can be achieved.

Recent observations and occurrences appear to indicate that these recommendations have not been adequately dealt with by the responsible departments or agencies of government.

As an example, the data gathered routinely by the Department of Environment is not related to plant operations. Without this it becomes difficult if not impossible to establish responsibility for long-term effects on people and property. The difficulties surrounding current medical problems in the Pincher Creek area are an example of this.

IV. References:

Environment Conservation Authority. 1972. *Environmental Effects of the Operation of Sulphur Extraction Gas Plants in Alberta, Report and Recommendations*. Edmonton: Environment Conservation Authority. See pages 56, 64-65.

V. To be Directed to:

Minister of Environment
Energy Resources Conservation Board

Copy to:

Minister of Energy and Natural Resources

VI. Proposed by the Pollution Study Group

Resolution 12

I. Coal Emissions

II. Be It Resolved:

THAT the Government of Alberta take the immediate regulatory steps necessary to comply with or better the national emission guidelines for thermal power stations.

III. Background:

There are presently no requirements for coal burning industries to recover sulphur, because Alberta coal normally has a low sulphur content (usually 2 percent or less). However, projections of the volume of coal which will be burned in Alberta indicate that by the year 2006, coal burning will be responsible for about 38 percent of the emissions. If the projections are correct and more stringent controls are not required, the yearly emissions of sulphur more than double when 1968 is compared against 2006. Coal would contribute 223,000 long tons of sulphur emissions annually by 2006. This is clearly unacceptable. If Alberta is going to do its share to control acid rain, then emissions from coal burning industries must be controlled.

On May 21, 1981, Mr. John Roberts, Minister, Environment Canada, announced that national emission guidelines for thermal power stations have been developed as an aid to provinces in establishing their own regulatory requirements. The guidelines are aimed at preventing any worsening of Canada's air pollution from the electric power industry, especially acid rain.

The emission limits specified in the guidelines are based upon commercially available technology capable of reducing emissions of nitrogen oxides by 50 percent, particulate matter by 99 percent, and sulphur dioxide by 90 percent.

The Public Advisory Committee hopes that the Government of Alberta will choose to exceed the guidelines established by Environment Canada.

IV. References:

1. Webber, H.J. and G.A. Warne. 1979. *Sulphur Emissions - Alberta Energy Issues*. Presentation to the PNWIS-APCA Annual Meeting, 7-9 November 1979, Edmonton.
2. Environment Canada. 1981. *Air Pollution Guidelines Proposed for Thermal Power Stations*. News release of May 21st, 1981.

V. To be Directed to:

Minister of Energy and Natural Resources
Minister of Environment
Energy Resources Conservation Board

VI. Proposed by the Pollution Study Group

Resolution 13**I. Recycling of Paper Products****II. Be It Resolved:**

THAT the Department of Environment expand and intensify its research program into alternate applications for the recycling of paper products.

III. Background:

Recycling of paper products has been conducted in Alberta for a number of years with the prime usage being for building materials in the construction industry, such as roofing shingles, drywall, tar paper and cellulose insulation. This industry is cyclic in nature and, with the present slowdown in the industry due to high interest rates, there exists little demand for recycled paper products.

Since stocks of paper suitable for recycling will continue to be a byproduct of our society, alternate applications for recycled paper products are required to balance the rise and fall of demand for it within the construction industry. Hence, it is recommended that the Department of Environment take the initiative necessary to balance supply and demand by supporting an intensive research program to uncover alternate uses for paper stocks which could ultimately be recycled.

IV. References:

Minutes of the Pollution Study Group meeting of June 29th, 1981.

Minutes of the Co-ordinating Committee's meeting with Mr. Jack Cookson, June 12th, 1981.

V. To be Directed to:

Minister of Environment

VI. Proposed by the Pollution Study Group

Resolution 14

I. Pesticide Applicator Training Program

II. Be It Resolved:

THAT the quality of the training program for the pesticide applicator licence be re-evaluated in terms of the level of competence attained by the trainees, so that each individual can be assured of having the knowledge necessary to understand the correct uses and hazards associated with all pesticides licensed for use in Alberta.

III. Background:

Society's increasing use of pesticides for the control of plant and animal pests has resulted in an increase in the opportunities for misuse. An example of this is the Turner Valley School yard spraying incident.

The licensing of pesticide applicators as is presently done is essential; however, the requirements for licensing are inadequate. The amount of material covered and the nature of the material do not lend themselves to being covered in three to five days.

A more comprehensive training program should heighten applicator awareness of pesticide application.

IV. References:

1. Minutes of the Renewable Resources Study Group meeting of July 3rd, 1981.
2. *Edmonton Journal*. "Pupils treated from effects of weed killer." May 15, 1981.
3. *Calgary Herald*. "Use of herbicide at school probed." May 16, 1981.
4. Alberta Environment. 1981. *Update*. September, 1981, Vol. 2, No. 3.

V. To be Directed to:

Minister of Environment
Minister of Agriculture

VI. Proposed by the Renewable Resources Study Group

Resolution 15

I. Medical Examinations for Pesticide Applicators

II. Be It Resolved:

THAT the present regulations under The Agricultural Chemicals Act be revised so that *all* employees working with pesticides have a mandatory medical examination, prior to and after each spraying season, in order to determine any relevant physical vulnerabilities that an employee might have prior to starting work and to subsequently identify any pathological conditions that may have been caused due to exposure to the chemicals used.

III. Background:

The Agricultural Chemicals Act provides for a mandatory medical examination to be done for anyone applying for a pesticide application licence. The inadequacy of this method arises from the fact that usually the licenced employee is the supervisor of a group of workers and he may not become involved in the actual spraying of the pesticide.

The spring and summer months appear to be the busiest time of the program. Many part-time applicators are hired. These employees do not have a medical examination because of their short-term employment.

The Agricultural Chemicals Act recognizes the hazardous nature of the substances and provides a mechanism for medical examination but at present it seems that in many instances the employee actually engaged in the spraying is not included.

The most effective solution is to ensure that all employees involved with the spraying of pesticides, including those employed for a short period of time, have mandatory medical examinations.

IV. References:

1. The Agricultural Chemicals Act.
2. International Labour Organization. 1977. *Safe Use of Pesticides*. International Labour Organization Occupational Health and Safety Series, International Labour Office, Geneva, Switzerland. 44 pages.
3. Zenz, C., ed. 1980. *Occupational Medicine, Principles and Practical Applications*. Chicago: Yearbook Medical Publishers. 944 pages.

V. To be Directed to:

Minister of Environment

Minister of Agriculture

Minister of Labour

Minister Responsible for Workers' Health, Safety and Compensation

VI. Proposed by the Renewable Resources Study Group

MINUTES
OF MEETINGS WITH THE MINISTER

MEETING OF FRIDAY, JANUARY 16th, 1981

The meeting was held in the offices of the Environment Council of Alberta at 9:30 a.m.

Present:

Dr. Martha Kostuch, Chairman, Public Advisory Committee
Ms. Betty Meier, Executive Secretary, Public Advisory Committee

The Hon. John W. Cookson, Minister, Alberta Environment
Mr. Tom Thackeray, Executive Assistant to the Minister

Dr. Bruce P. Dancik, Past Chairman, Science Advisory Committee
Mr. A.C. (Chris) Dunkley, Chairman, Non-Renewable Resources Study Group
Mrs. Joy Finlay, Chairman, Energy Conservation Study Group
Dr. G.C.D. (Graham) Griffiths, Chairman, Environment Protection Study Group
Mrs. E.S. (Betty) Hunter, Past Chairman, Public Advisory Committee
Mr. Andy Wierenga, Chairman-Elect, Renewable Resources Study Group
Mr. Ron Whistance-Smith, Vice-Chairman, Public Advisory Committee

Representing the Environment Council of Alberta:

Mr. A.D. Crerar, Chief Executive Officer
Mr. W.A. (Bill) Flook, Director, Liaison
Mr. Ken Nelson, Communications Officer

Mr. Cookson and Mr. Thackeray attended the regular meeting of the Co-ordinating Committee and the following questions were asked of the Minister:

(a) PAC's approach to other Ministers

When asked how we could best approach other Ministers, as suggested earlier by Mr. Cookson, he replied that since environmental issues tend to overlap with other Departments, say the building of a roadway through a park, for instance, PAC should make a very careful study of the issue and ask for a meeting with the Minister concerned, with a copy to Mr. Cookson. He felt it was appropriate to direct our concerns to the particular Minister involved.

In answer to the question of PAC being able to have access to caucus committees, Mr. Cookson said he did not think there would be any major problem with meeting with the caucus committees; however, at the Cabinet committee level, it would be very difficult. He said that every year special meetings of caucus committees are set up at Government House at which interest groups throughout the province make presentations. To arrange such a meeting, a letter should be directed to the Premier asking for the opportunity to make a presentation on a certain issue.

In reply to the question if there was any way in which we could get a little more uniformity between the departments of government, especially where the public is involved, Mr. Cookson said they certainly try to minimize that but it is a fact of life that Departments build up their own empires. "We try to break that down by inter-departmental committees," he said, "and failing that, the Ministers meet and iron out the difficulties." He said that perhaps our suggestion of meeting with other Ministers may help to give them a better understanding of the problems as they appear to the public.

(b) Ways that PAC can help the Minister of Environment

In answer to the Chairman's question of how we can best help the Minister in his job, he replied that meeting with other Ministers will help. He said that we have to go with the assumption that he will do his best to push a point as far as he thinks he can safely go without having a "collision." He said he would like us to have a better understanding of the limitations we are under and the points where he thinks there will have to be a trade-off on issues.

In response to Mr. Chris Dunkley's question of there being any possibility, or logic, to bringing in legislation to freeze development on prime agricultural land, the Minister said he had asked that a resolution be brought in last year to amend the formulae for funding to encourage development on poorer quality land, which does not appear to be supported. He said that we are covering the No. 1 and 2 soils with cement to a degree but we have agreed to fund irrigation expansion in the south which can double or triple the output there. Mr. Cookson said it was accepted policy of the Government not to site industry on No. 1 and 2 soil.

The topic of land use and consumption of good quality agricultural soils was discussed in detail by Mr. Cookson and the Committee. Mr. Cookson said he felt a weakness in the planning system is that Government has left the local municipalities and the regional planning commissions to set down their own by-laws. He said they have explored, but only explored, the possibility that the local authorities would receive 50 percent of the tax from industry and the balance would be put into a general "pot," and then prorated back out.

When the Chairman asked what boundaries we would have to work within on the subject of land use, the Minister answered that we should explore the inconsistencies of the legislation, explore the minimum standards for the province and, in doing so, point out that without those minimum standards there is a competition for industry which results in municipalities making concessions. He said he could support a suggestion that the Province set minimum standards for planning commissions and municipalities and maybe those standards should be different for different areas. The Minister said that perhaps we should have the top people in the regional planning commissions in to tell us how they set down the guidelines. He said we would have a good case for reducing planning conflicts if we set down minimums. Mr. Cookson added that we should get Mr. Fred Kidd's report. He did say there is a Rural Caucus Committee to which we might appropriately make a submission but that would depend on the

timing for the agricultural land proposal of the ECA. Mr. Crerar responded that information would not be collected until the winter of 1981-82 and hearings would not be possible until the Fall of 1982.

(c) Co-ordinating Committee attending legislative sessions and being introduced by the Minister

The Chairman asked the Minister if he would be willing to introduce us to the Legislature if we attended a session. Mr. Cookson replied, "yes," and suggested we might wish to attend during Question Period (2:30 to 3:30 p.m.) or at a time when some issue of concern to us was to be debated. He said Tuesday and Thursday afternoons are given over to private members' bills and resolutions and that might be of interest to us. We will check the Order Paper for a time when it would be particularly informative for us to attend.

The Chairman thanked the Minister for his recent replies to the letters on vinyl chloride and the ERCB, saying they were not only prompt but very thorough.

(e) ERCB Hearings

The Chairman referred to Mr. Cookson's recent suggestion that PAC may wish to make submissions to ERCB hearings where environmental matters are of importance and asked the Minister for his further comments.

The Minister said that PAC could be an intervenor at ERCB hearings, asking questions of proponents, and not be overstepping their bounds. Mr. Crerar added that it certainly seemed appropriate, especially with regard to cases where there is a clear environmental impact, but, as there are many ERCB hearings each month, PAC would have to very carefully select the hearings at which the "environment" is a very important concern.

Dr. Graham Griffiths said that he has apparently not received a reply to his letter of September 7th, 1980, requesting clarification of the agreement between Department of Environment officials and the Chairman of the ERCB on the procedures for ordering Environmental Impact Assessments.

The Minister said he will check into this and went on to say that the reason for this agreement was that he was concerned because the issue was raised by the public that the ERCB was cutting off public discussion on environmental concerns indicating these would be taken care of by an EIA. The agreement was worked out to provide better accord between the two Departments and has not resulted in loss of autonomy by the Minister; because of it, in fact, the procedure has been improved.

(f) Hazardous Wastes

(1) Mr. Cookson's recommendations

Mr. Cookson said he would be happy to go through the Report with the Co-ordinating Committee following its release on January 23rd, 1981. He added that a committee has already been set up consisting of Murdo MacKenzie, John Devereux, Margaret Noble, Lorne Mick, and Walter Harris.

(g) The Department of Environment

- (1) divisions
- (2) who co-ordinates activities

The Chairman asked if the Minister could supply us with an organizational chart of the Department of Environment, showing what the divisions are, the heads of those divisions, and possibly a liaison person within those divisions.

The Minister said this could be done.

(h) Conservative Party Conference

Mrs. Betty Hunter asked the Minister if the subject of environmental matters was discussed at the Conservative Policy Conference in Edmonton in November.

The Minister replied that although he had included environmental matters on the agenda for the Policy Conference, they did not get into that issue due to the urgency of the Constitution discussions. He did say the Conservative Party has an annual convention which will be held in Calgary this year, on March 20th, 21st, and 22nd, at the Palliser Hotel. It is open to the public and resolutions will be discussed. We should contact our MLAs for input to this Convention.

(c) Water Advisory Committee's Report

The Chairman asked the Minister if there was any date set for receiving the Water Advisory Committee's report, to which Mr. Cookson replied that a document is being prepared and early in February a presentation will be made to the Premier, adding he was not conversant with the contents, although a member of his Department is on the Committee. He said the major issue is whether somewhere along the way we should be talking about water transfer, but they were looking at other issues as well.

The Chairman asked if there was anything we could do about the Joffe situation, saying she understood the ERCB has given their approval. Mr. Cookson replied that Phase 2 is a *fait accompli* and it will come well within the air and water quality standards. If Phase 3, which will be on the same site, is found to exceed the environmental limits, the ERCB will hold hearings again.

Mr. Ron Whistance-Smith asked if it was possible to use the land surrounding the plant for disposal of municipal wastewater effluent and to monitor and crop it. It could be an experiment and a model, a real show-piece, he said.

The Minister said he did not see any problem with that, adding that all the additional land is presently rented out. He said there is always the question of economics in the use of effluent on the land. The municipality should acquire the land, he said. If a plant was reasonably close to a sewage source, it would be a practical thing, Mr. Cookson said, adding he felt the companies would be as accommodating as they could be.

Mr. Cookson added that near this Union Carbide plant is one of the major bluebird assembly areas of the province and Union Carbide have made the commitment to protect this area. They will put a specialist in the area and retain the site forever.

Mr. Cookson said he would like to meet with the Committee as soon as possible on the Hazardous Wastes Report and this was tentatively set for the Co-ordinating Committee meeting of February 13th, 1981.

The Chairman thanked Mr. Cookson for his co-operation and input and the Minister left the meeting.

MEETING OF FRIDAY, JUNE 12, 1981

The meeting was held in the offices of the Environment Council of Alberta at 9:30 a.m.

Present:

Dr. Martha Kostuch, Chairman, Public Advisory Committee
Ms. Betty Meier, Executive Secretary, Public Advisory Committee

The Hon. John W. Cookson, Minister, Alberta Environment
Mr. Tom Thackeray, Executive Assistant to the Minister

Dr. Lochan Bakshi, Chairman, Urban Environment Study Group
Mr. Bill Batycky, Chairman, Environmental Education Advisory Committee
Mr. A.C. (Chris) Dunkley, Chairman, Non-Renewable Resources Study Group
Dr. Graham Griffiths, Chairman, Environment Protection Study Group
Mrs. Joy Finlay, Chairman, Energy Conservation Study Group
Mrs. Betty Hunter, Past Chairman, Public Advisory Committee
Mr. Bob Richardson, Chairman, Resolutions Committee
Dr. Terry Veeman, Vice-Chairman, Science Advisory Committee
Mr. Andy Wierenga, Chairman, Renewable Resources Study Group
Mr. Lub. Wojtiw, Chairman, Pollution Study Group

Representing the Environment Council of Alberta:

Mr. A.D. Crerar, Chief Executive Officer
Mr. W.A. (Bill) Flook, Director, Liaison

Mr. Cookson and Mr. Thackeray attended the regular meeting of the Co-ordinating Committee and the following items were discussed with the Minister:

(1) Mr. Cookson's responses to the Public Advisory Committee's 1980 Resolutions

(a) Resolution 2 - "Participants Review Board"

The Minister said he recognized the problem some groups have with funding presentations to hearings but making funding requests to a panel or a board would frustrate everybody and the Resolution had to be turned down.

He went on to say he would like to see the ECA, through its various groups, make submissions before different bodies and asked Mr. Crerar if it would be within his purview to provide funding.

Mr. Crerar replied that the ECA would provide out-of-pocket expenses; travel, food, and lodging, for members of the Public Advisory Committee but that would be only part of the funding required.

The Minister said the ERCB can allocate some funding to those intervenors within the specified area of the hearing, so there is some provision there, but said he was not aware of just how the ERCB assessed these requests. He added that he thought the Local Authorities Board operated in the same way.

(b) Resolution 9 - "Environmental Assessment for and Regulation of the Conversion of Land to Residential Uses"

Dr. Griffiths, in discussing this resolution, said that from the point of view of the Study Group, if the Government at last sees its way clear to doing something in response to the need for protecting agricultural land they would not argue as to the mechanics of one proposal as opposed to another. He added that action is very much needed in the Edmonton-Calgary corridor where the largest amount of good agricultural land is being diverted to urban and industrial use and he felt the Government should intervene in this process and reserve some of the very best land for the future.

The Minister replied that a very deep concern of his, personally, is the loss of agricultural land. He has presented the case before Cabinet and the caucus and has some colleagues who are equally concerned. He said the Government has left a lot of the decision process up to the municipalities through the Planning Act and there are some weaknesses in that. The Minister said it might be of value to take another look at the Planning Act itself and there will be further discussion on this when public hearings on land use get under way.

In referring to the imminent announcement on the Edmonton annexation, the Minister said some new proposals on preserving the topsoil will be announced. The topsoil will be removed, either for long-term storage or to be relocated. Dr. Kostuch said there is a lot more to good agricultural land than just transferring the topsoil and Mr. Cookson agreed.

Dr. Griffiths asked if there was anything PAC could do that would be useful to the Minister, and he replied that we should make an effort at ERCB hearings and the scheduled land use hearings will also be helpful. Mr. Cookson added that his greatest concern when establishing the Edmonton boundaries, was the large tract of highly productive land being taken out of production. He said that land use is a very complex issue and he would hope PAC becomes totally involved with it.

Mr. Crerar added that there are lots of answers to the land use problems but there are problems with each of the answers and every possible answer has to be looked at in detail.

(c) Resolution 13 - "Compensation for Loss of Environmental Quality"

Mr. Andy Wierenga said that we were concerned about the reply to this resolution. The Minister's response made us well aware of the regulations that are in

place that provide for the consideration of compensation for loss of environmental quality, he said, but what is really being done as far as the Dickson Dam is concerned?

Mr. Cookson replied that they have structured an advisory committee in the area to do the environmental studies that they think are important once the dam is in place. He said that Mr. Nigel Pengelly, MLA, Innisfail, is chairman of the committee which is composed of biologists, representatives from the County, and some farm members. The advisory committee has been requested to put forth some recommendations to Cabinet with regard to compensation for the loss of wildlife due to flooding. Alberta Environment has not only acquired the land to the boundaries of the dam, but additional land has been purchased as well. A good portion of the dam will not be readily accessible to the public, he said.

The Minister said that Mr. Bud Miller, Associate Minister, Public Lands and Wildlife, and the Fish and Wildlife Division, are also involved in the wildlife habitat area. He said that some of the additional land purchased will probably be allowed to revert to its natural state.

Mr. Cookson said the Department informed the landowners that they could remove the topsoil from the land that was to be flooded but no one accepted the offer. He added that due to some submissions, the Department is carefully testing some of the gravel deposits and he has asked that Heritage Trust Funds be provided to transfer the gravel to higher lands for use by the municipalities.

Dr. Kostuch requested that we be supplied with a list of the compensations that have been provided for loss of environmental quality and, in what form.

(d) Resolution 6 - "Microbiological Quality of Water"

Confirming his response to this Resolution that, until local epidemiological studies are conducted, including this organism (*Pseudomonas aerogenosa*) in a standard is unwarranted, the Minister said that some consultation will take place at the Vegreville environmental centre before any decision is made. It is not a closed door, he said; if we see the Prairie Provinces Water Board perceive it as a practical thing to do there could be changes. The report to the International Joint Commission has to take place first, he said. He added that the "1973 PPWB Water Quality Objectives" are in the process of being revised and updated and he will provide us with updates on the progress.

(e) Resolution 11 - "Stormwater Lakes"

Dr. Griffiths said the response to this Resolution was satisfactory but generalized and added that we are concerned with the advertising by some of the developers that show these lakes can be used for boating, fishing, etc.

The Minister replied that the problem may be false advertising and he was given a copy of a brochure by a developer advertising the recreational capabilities of a stormwater lake. The Minister asked if PAC agreed with the collection of the stormwater in these lakes and was assured we agreed with the concept. He added that the Department of Social Services and Community Health carry out an on-going testing program of these lakes.

(f) Resolution 7 - "Land Application of Sewage Effluents"

Mr. Wojtiw said the answer was satisfactory and he personally did not think a further seminar on land application was needed at this time.

The Minister said he wished this could be moved faster; it is a good alternative and could catch on, particularly from Red Deer south, he added.

(g) Resolution 10 - "Long Range Transport of Atmospheric Pollution"

Mr. Wojtiw complimented the Minister and his Department on the action taken on this subject and asked the Minister if we could have a copy of the report on the regional scale transport of air pollutants in northeastern Alberta and northern Saskatchewan which was to be published in May, 1981.

The Minister replied, "Yes," and added that, based on the report, which he presumes will be a public document, they have already structured a further committee review. He said that the bottom line is that there is, as yet, no indication of any deterioration. The Minister went on to say that we should be dealing with the sulphur problem as he is still concerned that the farm people themselves are not aware of the nature of all of the emissions.

Mr. Wojtiw asked the Minister if it would be possible to have the TAGA unit placed at Pincher Creek and the Minister replied that it will take a year to get the unit operational after bringing it in but he will make a note of our concerns.

(h) Resolution 12 - "Principles of Conservation and Recycling"

Mr. Wojtiw told the Minister that we support and encourage the Department in their development of an educational program on recycling for schools and look at this as a very positive action and congratulate the Department for their foresight in that direction.

Mr. Cookson said that Mr. King (Alberta Education) has assigned a specialist to this program, adding that young people are very concerned about recycling.

The Minister said the Resolutions were good and was aware we had channelled some resolutions to other Ministers as he had suggested.

The Chairman thanked Mr. Cookson for his prompt responses to the Resolutions.

(2) Water Advisory Committee

With regard to the Water Advisory Committee, Mr. Cookson said that he still hasn't got an official document outlining what is going on.

Mr. Peter Melnychuk, Assistant Deputy Minister, who is on the Committee, has indicated there appears to be no deadline for the report as yet. The Minister said he had not had a chance to talk to Mr. Henry Kroeger, who has a great interest in this area. The report will be made public as soon as it has been completed. The Minister said the Committee, besides Henry Kroeger and Dr. Gunning, has the following members:

Emmett Hall
Marsh Porter
Alan Hyland
Burns Wood
Chris Goodman
Peter Melnychuk
Mickey Clark
Cy McAndrews
Martin Paetz
Gordon Gaebert
Lloyd Hulton
Tom Biggs
Ike Lawrence

He said there is a representative from the northern part of the province, and added that they wanted a broad representation on the Committee.

Dr. Kostuch advised the Minister that the Co-ordinating Committee will be meeting with Mr. Kroeger later this summer.

(3) Air Monitoring Network - Fort Saskatchewan

Dr. Griffiths said that this topic continues to be of extreme local concern and asked if the Minister had anything new to report in this area.

Mr. Cookson replied that they have had some discussions with industry which would lend some support to an industry-monitoring organization and added that there is such a system in Refinery Row. He said the Department encourages industries to get together themselves, as Environment takes the position that the polluter has to be held responsible. Industry has to be responsible for reporting and the Department is a regulatory agency which will occasionally move in and double check. The Department establishes where the ambient monitoring should be, establishes the stack standards, etc.

The Minister said questions have been raised about the danger in the event of a disaster and added it is his understanding that, as the monitoring is set for minimums, by the time the monitors recorded the danger level, it would be too late. When a breakdown signals emissions in the plant, everything is automatically shut down. The event has happened before the monitors even start to respond. He added that in theory this is what is supposed to happen; stopchecks are built in. "I don't know what more we can do," he said.

Dr. Griffiths said that there are obviously problems with communications between the plants and town officials, adding that the Town is worried about the lack of access to monitoring information.

The Minister said the Department is having further meetings with the Town and added the Fire Department is the contact point in Fort Saskatchewan for any emergency. The Minister went on to say that they have \$28,000 approved in the 1981-82 budget for a mobile air-monitoring unit which will be in operation in about a year and they have assured Fort Saskatchewan that it will be used for quick monitoring in their area. He said that he would supply the Co-ordinating Committee with a list of the pollutants the mobile unit will be able to monitor.

Dr. Kostuch asked the Minister if there were any items he would like us to look into, and he said there were several things he thought we might pursue.

Mr. Cookson said the Department is having a lot of trouble with paper recycling and there are two areas in which he would like a lot of support. The one area concerns building standards, either through Housing and Public Works or Labour, that would enable the installation of a system to allow for "separation at source" of garbage in apartment buildings. The second thing would be that with future licenses or new licenses for the pulp and paper industry there should be some way that they should be held responsible for recycling this "pile of paper" rather than chopping down more trees. He also noted that part of the breakdown in the paper recycling industry was due to a marketing problem.

One other thing the Minister asked that we give him some support in is the use of incinerator units for garbage. He said the Department is heavily funding regional land fills but there seems some logic, in communities of 10,000 to 15,000, for the use of expandable incinerator units where stack emissions could be controlled and energy lost could be regenerated. He advised that the Department will be looking at operations in the United States and in B.C. He said that it might put more smoke in the air but he thought that problem could be accommodated by the present technology. It also might be more economical, he said.

Dr. Kostuch requested that the Minister provide us with some information on these incinerator units and he agreed to do this.

Dr. Kostuch thanked Mr. Cookson for his time and assured him that we would look at these concerns.

**ANNUAL REPORTS
OF COMMITTEES AND STUDY GROUPS**

ANNUAL REPORT OF THE CO-ORDINATING COMMITTEE

Report from the Chairman - Dr. Martha Kostuch

I would like to thank the chairmen for their co-operation. After some coaxing, most of the chairmen came well prepared to the meetings. They were willing to try some new activities including planning, presenting briefs, and visiting the Legislature.

There were a number of changes in chairmanship during this year, but thanks to the co-operation of outgoing and incoming chairmen, the changes were made smoothly.

There were some problems during the year, including the resignation of one organization, the Alberta Society of Professional Biologists, from the Public Advisory Committee (PAC) and the resignation of one study group chairman (Mrs. Joy Finlay).

The Public Advisory Committee had no trouble communicating with the Government. The Hon. Jack Cookson, Minister of Environment, agreed to meet with us whenever possible, and did meet with us several times during the year. He also recommended that we meet with other ministers when our concerns overlap their jurisdictions, with the result that we also met with the Hon. Bud Miller, Associate Minister of Public Lands and Wildlife, and the Hon. Henry Kroeger, Minister of Transportation (and a key member of the Water Advisory Committee).

Communications with the civil servants were also excellent. They were always ready and willing to attend both Co-ordinating Committee and study group meetings. Mr. Les Cooke (Energy and Natural Resources) and Mr. Ken Smith (Environment) were especially helpful, and both volunteered to act as contacts for their respective departments.

We obtained information directories from the departments of Environment and Energy and Natural Resources, and from the Energy Resources Conservation Board.

In addition to Co-ordinating Committee minutes, which are sent to all PAC members, the *PAC Newsletter* helped keep members and everyone on the ECA's mailing list informed of PAC's activities.

The chief means of communicating with the public was through the media. Mr. Ken Nelson worked hard to ensure good media coverage of study group meetings. The media must be congratulated for their consistent coverage of PAC meetings.

I believe that public awareness of both PAC and the ECA increased during the year, and the media was largely responsible for this increased awareness. We must continue to work to increase the public's awareness of PAC, and the brochure being prepared now should help in this area.

The Co-ordinating Committee participated in several events not sponsored by PAC during this year. Several members of PAC attended the ECA's Public Participation Workshop in March. In February, I presented a brief, on behalf of PAC, to the House of Commons

Sub-committee on Acid Rain. Our main recommendation formed the basis for the sub-committee's chief recommendation for Alberta. Mr. Ron Whistance-Smith participated in a workshop on hazardous wastes. Most of the members of the Co-ordinating Committee attended the annual meeting of the Canadian Environmental Advisory Committees in Banff in late May and early June. Dr. Frank Kozar represented PAC at the Human Side of Energy Forum. I represented PAC at the Prairie Environmental Advisory Conference at Camp Rayner, Saskatchewan, in October.

Our 1980 resolutions received a rapid response from the Minister of Environment, and also received prompt responses from the other ministers. It is important for PAC to follow up on resolutions and keep on doing so until they are acted upon, even if this takes years (which it often does).

The Co-ordinating Committee was in frequent contact with the ECA's hazardous wastes panel. We also monitored and are continuing to monitor the activities of the Hazardous Wastes Implementation Team. I think it is very important to follow up on ECA public hearings, and PAC should play an even more active role in this area in the future.

The Public Advisory Committee made frequent use of the expertise available on the Science Advisory Committee and the Environmental Education Advisory Committee, as well as the research staff of the ECA.

When I became Chairman, I suggested that PAC should be a catalyst for other groups and individuals concerned about the environment, by producing information and encouragement. I believe that PAC has performed this function (for example, for the Alberta Public Health Association on the subject of noise). However, I think PAC can and should increase its catalyst activities. One way this can be done is by soliciting the active support of member organizations when appropriate. Another way is to support other environmental groups, including the Environmental Groups Network.

Your Co-ordinating Committee spent a considerable amount of time planning during this past year. I hope, as a result of this planning, that PAC will have more positive input into the decision-making process.

Thank you to the members of PAC, to all of the chairmen, and to the staff of the ECA, for a very challenging, sometimes frustrating, but definitely rewarding year.

Martha Kostuch

Chairman, Co-ordinating Committee

Members of the Co-ordinating Committee

Chairman - Dr. Martha Kostuch

Vice-Chairman - Mr. Ron Whistance-Smith

Past Chairman - Mrs. Betty Hunter

Study Group Chairmen:

Energy Conservation - Mrs. Joy Finlay
 Environment Protection - Dr. Graham Griffiths
 Non-Renewable Resources - Mr. Chris Dunkley
 Pollution - Mr. Lub Wojtiw
 Renewable Resources - Mr. Andy Wierenga
 Urban Environment - Dr. Lochan Bakshi / Mr. Steven Thompson
 Resolutions Committee - Mr. Bob Richardson
 Science Advisory Committee - Dr. Marshall Gysi / Dr. Terry Veeman
 Environmental Education Advisory Committee - Mr. Bill Batycky

Mrs. Betty Hunter, Mr. Ron Whistance-Smith, and Mr. Bill Flook chaired the Nominating, Annual Meeting, and Membership Committees respectively.

ANNUAL REPORT OF THE SCIENCE ADVISORY COMMITTEE

Report from the Chairman - Dr. Terry Veeman

The Science Advisory Committee (SAC) met on March 16th, June 15th, and September 2nd, and will hold their final meeting for 1981 on December 14th.

Dr. Marshall Gysi's chairmanship terminated with the September meeting, at which he resigned from SAC to accept a two-year posting in Nepal.

Many issues have been put before SAC this year from the study groups, the ECA, and originating within the committee itself, which resulted in the following action being taken:

- Formed the *ad hoc* Committee on the Security of the Agricultural Land Base which will review ECA papers on, and contribute to, the information being assembled for the public hearings tentatively scheduled for late fall, 1982.
- Reviewed *Report on Blackfly Larvae Control in the Athabasca River* which resulted in a letter to Mr. Cookson urging that an objective expert evaluate the technical reports, and this has been done.
- Provided an independent scientific review of correspondence between the Oldman River Basin Panel and Mr. Cookson, which is still under way.
- Reviewed and provided comments on the Environment Protection Study Group's resolution on funding of agricultural research, as well as the resolution on soil classification proposed by the Non-Renewable Resources Study Group.
- Reviewed Dr. E.E. McCoy's *A Report Regarding Health Complaints of Families Living in the Pincher Creek - Waterton, Alberta Area* which prompted a letter to Mr. Cookson suggesting additional monitoring and research be done in the Pincher Creek area.
- Reviewed and commented on the report *A Cost Comparison on Nuclear and Fossil Power for the Alberta Tar Sands* at the request of the Environment Protection Study Group.

- Reviewed the Public Advisory Committee's brief on the Blackfoot Grazing Reserve and later met with Mr. Les J. Cooke, Executive Director, Resource Evaluation and Planning Division, Alberta Energy and Natural Resources, to discuss identified contentious points.
- Discussed the possible development of a water management policy statement for the province at the request of Dr. Martha Kostuch, PAC Chairman, our consideration of which is presently awaiting the report of the Water Advisory Committee.

The first of the SAC series of occasional papers, *Trace Elements in Coai: A Review*, by W. Jones and L. Hills, was published through the ECA and is available from the ECA Library.

In 1982, SAC is likely to focus its attention on the upcoming hearings on the security of the agricultural land base. The contribution that SAC can make continues to depend on the work of its members and the excellent support given by ECA staff, especially our dedicated secretary, Ms. Betty Meier.

Dr. T.S. Veeman

Chairman, Science Advisory Committee

Members of the Science Advisory Committee

Dr. C.F. Bentley	University of Alberta - Soil Science
Dr. H. Buckmaster	University of Calgary - Physics
Dr. B.P. Dancik	University of Alberta - Forest Science
Dr. R.W. Davies	University of Calgary - Biology
Prof. P. Dranchuk	University of Alberta - Mineral Engineering
Dr. M. Gysi*	University of Calgary - Civil Engineering
Dr. H.W. Habgood	Alberta Research Council
Dr. J. Hackler	Centre for Criminological Research
Dr. L.V. Hills*	University of Calgary - Geology
Dr. A. Laycock	University of Alberta - Geography
Dr. R.P. Pharis	University of Calgary - Biology
Mr. L.D. Rae	Barrister and Solicitor
Dr. F.W. Schwartz	University of Alberta - Geology
Dr. D. Thompson	University of Calgary - Environmental Design
Dr. W.H. Vanden Born	University of Alberta - Plant Science and Alberta Institute of Agrologists
Dr. T.S. Veeman	University of Alberta - Economics

* No longer on study group

ANNUAL REPORT OF THE ENVIRONMENTAL EDUCATION ADVISORY COMMITTEE

Report from the Chairman - Mr. Bill Batycky

This past year has been a very successful year for the Environmental Education Advisory Committee (EEAC). The committee has reaped the benefits of a strong and dedicated membership. The goals and objectives presented at the 1980 Annual Joint Meeting have, to a large degree, been achieved during the last twelve months.

Two ECA-supported public awareness surveys were completed and the results are to be used, along with findings from other recent and past surveys, to produce a report entitled *The State of Public Perception of, and Involvement in, Environmental Issues*. This presentation will help give direction to, and support for, future programs of this committee and, as well, it may assist PAC and its study groups in their deliberations.

The strategy will be to formulate positions on:

- a) public awareness, knowledge, and opinions on environmental issues and agencies
- b) the concern and interest the public has about environmental issues
- c) the commitment and sense of responsibility of the public to involvement and participation in environmental management decisionmaking
- d) the attitudes of the public toward present environmental management and public involvement in this environmental management

as they all relate to Albertans, past and present.

A working internal document entitled *Change Strategies* was produced. It presented the ideology inherent in change, the change process itself (covering research, development, diffusion, and adoption), the role of change agents, and some applications to the ECA, PAC, and its study groups. Specific recommendations/strategies were included to answer a request from PAC to help study groups put together public education/awareness packages that deal with key issues as identified by a particular study group.

An awareness program was developed to bring about public action and response to environmental issues. It outlines the lines of communication and strategies to inform and focus the efforts of the individual toward effective environmental decision making. The strategies promote the concept that *being environmentally concerned is sound citizenship*. The process of developing acceptance of the responsibility for the environment we live in, and recognizing the consequences of our actions, must be given paramount importance.

Phase I of this three-phase plan is at present being applied to the issue of private sewage disposal systems (as identified by the Pollution Study Group).

The EEAC encouraged Alberta Education to provide for an Environmental Education Co-ordinator. To our pleasure, this position was filled as of 1 July 1981.

Recently, the EEAC set up a committee to liaise with environmental education co-ordinators of various government departments, as well as to assess the present status of formal institutional environmental education programs.

I would like to give my sincere thanks to all members of the EEAC for their support and quality participation in this past year's program. We have enjoyed excellent support from PAC and its study groups and from the staff of the ECA, who have provided us with assistance as requested. Betty Meier, PAC Executive Secretary, deserves a special commendation for her efficiency and the professional manner in which she carried out her responsibilities. Many were the times that she went beyond the call of duty to facilitate the work of the EEAC and PAC.

Without all this support, the Environmental Education Advisory Committee would have become a legend.

William P. Batycky

Chairman, Environmental Education Advisory Committee

Members of the Environmental Education Advisory Committee

Mrs. S. Abercrombie	Representing the Environment Protection Study Group
Mr. G. Anthony	
Mr. B. Batycky	
Mr. E. Berndt	
Mrs. J. Crook	
Mr. G. Doherty	
Dr. S. Dalton	Representing the Urban Environment Study Group
Mrs. J. Finlay	Representing the Energy Conservation and Non-Renewable Resources study groups
Dr. M. Muc	Representing the Pollution Study Group
Mr. G. Shaw	
Mr. R. Sloan	
Mr. A. Smandych	
Dr. B. Westbury	
Mr. W. Wetmore	
Mr. R. Whistance-Smith	Representing the Renewable Resources Study Group
Mr. W. Wismer	
Mr. M. Wright+	Alternate for Mr. A. Smandych

+ Attended study group as alternate

ANNUAL REPORT OF THE MEMBERSHIP COMMITTEE

Report from the Chairman - Mr. W.A. Flook

The membership roster of the Public Advisory Committee on the Environment was kept under continuing review during the year and revised editions of both the general and study group membership lists were issued in July, October, and December.

Two meetings of your Membership Committee were held, on January 7th and October 9th. An extensive list of Alberta organizations was examined and 13 were added to the five carried over from 1980 for consideration as potential members of PAC. Letters requesting further information were issued as necessary and eight replies, all positive, have so far been received.

As a result, four new members have been appointed:

Alberta Rural Ratepayers' Association	- Mr. Cam Finlay
Cold Lake Community Advisory Committee	- Mr. Don Appleby
Native Outreach	- Mr. Rene Paul
Northwest Fishermen's Co-op	- Mr. Art Emes

Invitations to nominate a member have been issued to the following organizations:

Alberta Coalition for Nuclear Responsibility
Canadian Nature Federation

For her part in keeping a close eye on the expiry dates of memberships, maintaining membership files, arranging meetings, and taking minutes as well as handling correspondence, I am most grateful to my very capable secretary Elaine Kaiser and wish to record the committee's appreciation of her services.

Memberships in the Science Advisory Committee were also reviewed by that committee, and we wish to welcome new member Dr. Fred Bentley, who you will all get a chance to meet, both as speaker and colleague, at this conference.

The Environmental Education Advisory Committee membership was also under review, and they have added Mr. G. Doherty, Dr. Julian Guay, and Mr. Lee McKibben to their ranks.

I cordially welcome these gentlemen as well as the other new members of PAC and SAC to the ranks of the Public Advisory Committee.

On the other hand, regrettably, we had to say farewell to the following members during the year:

Jim Aitken	Phil Elder	Barry Kolenosky	Jim Robison
Barbara Blackley	George Evans	Nils Kvisle	Arden Rytz
Neil Chymko	B.A. Friesen	Bob Lane	Cameron Scott
Lynn Clarke	Gary Frost	Bob Langdale	Peter Stewart
Ken Clementi	Fred Hagen	R. LeLand	Bill Stuart
Darwin Cronkhite	George Hare	Jim Martin	Don Thompson
Maurice Despins	Jim Hoskins	Jean MacDonald	Lou Zivot
George Dudley	Harvey Johnson	Don Pattie	

all of PAC; Marshall Gysi, Len Hills, Paul Lewis, and Derald Smith of SAC; and Garnett Anthony and Gary DeLeeuw of the EEAC.

On behalf of the members of PAC, I wish to express our sincere thanks for the help and companionship these members gave during their terms of office. We hope that they all might derive every success and satisfaction from their new areas of interest and trust that we might again be associated with them at some future time.

Statistics are usually the least exciting part of any report and I hesitate to impose them on you, but they must take their place in the record, so here they are:

- 10 members were reappointed to represent their organizations for an additional term
- 30 new members were appointed to replace previous members
- seven new alternates were appointed
- SAC has one new member and EEAC has three
- at the same time, SAC has lost four members, EEAC has lost two, and PAC itself has lost 31
- the total membership of PAC, including unaffiliated members and alternates, now stands at 138, representing 120 different organizations
- SAC has 14 members and EEAC has 12, plus six study group representatives.

The appointment of unaffiliated members is always a pleasure for your committee. It indicates, in a very special way, the respect and affection the recipient has earned from his or her colleagues. I am pleased to announce the appointment of Mr. Ian Shaw and Mr. Keith Driver to this select group, and the reappointment of Mr. Elmer Kure and Mr. Doug Patching. I must also report that on your behalf I have issued invitations to unaffiliated membership to Dr. Don Pattie and Mr. Nils Kvisle, both of whom, although unable to accept at present, expect to rejoin our ranks during 1982.

Finally, I wish to express my sincere thanks to Ron Whistance-Smith and Betty Hunter, my very able co-members on your committee. Without their willing assistance and very good judgment, the calibre of your membership might well have been in severe jeopardy.

W.A. Flook
Chairman, Membership Committee

ANNUAL REPORT OF THE ENVIRONMENT PROTECTION STUDY GROUP

Report from the Chairman - Dr. G.C.D. Griffiths

The study group held eight meetings during 1981, most of them well attended. Land use was identified as our major theme for the year, and five of our meetings featured guest speakers dealing with land use topics, as follows:

- 10 January 1981: Our Vice-Chairman, Dr. Guy Swinnerton (University of Alberta), and Mr. Archie Landals (Alberta Recreation and Parks) spoke on the topic "Recreational Access to Private Land: Alternative Land Use Patterns for the Future."
- 14 February 1981: Dr. C. Fred Bentley (Agrologist), Dr. W. (Bill) McGill (University of Alberta), and Mr. Adolf Goettel (Alberta Agriculture) discussed "Declining Soil Fertility in Alberta: Its Causes and Possible Remedial Action."
- 12 September 1981: The highly controversial Odyssey proposal was discussed by President Dave Fennell and other representatives of the Cline River Development Corporation, Dr. Martha Kostuch (representing the Alberta League for Environmentally Responsible Tourism), Messrs. Les Cooke and Ken Smith (representing departments of the Alberta Government), and Mr. Dennis Chevallier (representing the Cline River Public Liaison Committee).
- 17 October 1981: The topic "Freedom of Access to Recreational Land" was addressed by Mr. Mac Forbes (Alberta Energy and Natural Resources) and Mr. Elmer Kure (Alberta Fish and Game Association).
- 21 November 1981: Mr. Les Cooke (Alberta Energy and Natural Resources) and Dr. W.E. (Bill) Phillips spoke on the topic "Alberta's Grazing Reserves Program - Policies and Economics."

Arising from these meetings, we have prepared formal resolutions now before this annual meeting on the use of private land for recreation and on agricultural research in Alberta. Our concerns regarding the inadequacy of the environmental impact assessment process as applied to the Odyssey project have been expressed in a letter to the Minister of Environment. Action arising from the October and November meetings will be considered during the coming year.

Three other meetings were held in addition to the land use series. On March 14th, Messrs. Eugene Kupchanko and Jerry Lack of Alberta Environment discussed the subject "Air Monitoring Systems at Petrochemical Centres in Alberta." While no formal resolution is before this meeting, I am pleased to report that our interest in this topic attracted considerable publicity and has helped to persuade Alberta Environment to undertake studies of air quality in Fort Saskatchewan. On April 25th, we held a meeting on the topic "Pine Beetle Control and Salvage Operations, With Special Reference to the South Castle Area" in response to a local request. This meeting was addressed by Mr. Don Fregren (Alberta Energy and Natural Resources), Mr. David Sheppard (Alberta Wilderness Association) and Dr. Herb Cerezke (Northern Forest Research Centre, Environment Canada). Following the meeting,

the Alberta Forest Service has undertaken further studies and deferred decision on whether to log certain controversial sites. The remaining meeting on June 20th was devoted to study group business and viewing of a film on Dutch elm disease.

Other topics handled by the study group this year have included:

- a) the use of poisons for predator control, on which we have prepared the resolution before this meeting
- b) the preparation of the resolution before this meeting on secrecy in environmental affairs, a topic referred to us by the Co-ordinating Committee following media controversy during the summer
- c) the need for incineration of refuse from international flights, which we have pursued to the stage of an agreement having been reached that the airlines caterer (Cara Operations Ltd.) will build and operate the incinerators
- d) the need for a railway routing inquiry for the Edmonton region, on which we have continued to correspond with ministers in the light of our 1979 resolution
- e) the need for precautions against the introduction of Dutch elm disease into Alberta, on which the study group's suggestions have been well received by Hon. Dallas Schmidt
- f) land management planning, in which context we expressed support for the "Program for Public Involvement in Integrated Resource Planning in Alberta" announced by Hon. Bud Miller
- g) Kananaskis Country, for which we obtained a breakdown of expenditures from Hon. Peter Trynchy
- h) access road construction in the Porcupine Hills, on which we expressed concerns to the Hon. Mervin Leitch.

My thanks are due to all study group members who have contributed to this year's meetings, and especially to my vice-chairman, Dr. Guy Swinnerton. I hope that their enthusiasm will continue through the coming year.

Dr. G.C.D. Griffiths

Chairman, Environment Protection Study Group

Members of the Environment Protection Study Group

Mr. D. Abbey	Canadian Union College
Mrs. S. Abercrombie	Unaffiliated
Mrs. H. Baradoy*	Olds College - Students' Association
Mrs. D. Broadbent	Federation of Alberta Naturalists
Mr. A. Chanin	Calgary Chamber of Commerce
Mr. M. Cooper	Foothills Protective Association
Mr. K. Crane	Coal Association of Canada
Mr. C. Dubeau	Alberta Beekeepers Association
Dr. R.J. Gehrke, D.C.	Alberta Chiropractic Association
Mr. E. Ghostkeeper	Federation of Metis Settlements
Dr. G.C.D. Griffiths	Unaffiliated
Mr. F. Hagen	Western Stock Growers' Association
Mr. D. Harvey	Sierra Club of Alberta

Mr. B. Kolenosky*	NAIT - Students' Association
Mrs. B. Laychuk	Calgary Local Council of Women
Mr. R. Lightning	Indian Association of Alberta
Prof. B.J. Mundel-Atherstone	University of Lethbridge
Mr. G. Norman	Strathcona Industrial Association
Mr. R. Proudfoot	NAIT
Mr. R. Richardson	Canadian Manufacturers Association
Dr. R. Scace	Unaffiliated
Mr. P. Seymour	University of Alberta
Mr. M. Slomp	C.J.L. Foundation
Mr. E. Stolarчук	Keyano College
Dr. G. Swinnerton	National and Provincial Parks of Canada, Edmonton Chapter
Mr. D.C. Thompson*	Alberta Society of Professional Biologists
Mrs. D. Whitenett	Alberta Women's Institute
Mr. A. Wigmore	Alberta Association of Municipal Districts and Counties

* No longer on Study Group

ANNUAL REPORT OF THE NON-RENEWABLE RESOURCES STUDY GROUP

Report from the Chairman - Mr. A. Chris Dunkley

Since our last Annual Joint Meeting of the Environment Council of Alberta and the Public Advisory Committee, this study group has held 11 meetings. The Energy Conservation Study Group members attended our meetings throughout this year. Our study program for the year was therefore designed to deal with two areas that were specifically related to energy conservation.

Our May meeting dealt with aspects of pricing of electrical energy to provide us with a better understanding of built-in load and demand factors. Mr. Horst Fauser spoke to us on the advantages of "time-of-day pricing" and the experience of Germany in using this technique.

Mr. Bevan Laing, Distribution Planning Engineer for Alberta Power, provided a great deal of factual information on current research and the components that are built into the pricing structure in use in Alberta.

Our August and September meetings dealt with energy conservation techniques in building codes and building design. Speakers on this subject were Mr. Gerd R. Specht, Manager of Energy Analysis with Alberta Housing and Public Works; and Mr. Stephen Tyler, Senior Energy Conservation Officer, Policy Analysis and Liaison with Alberta Energy and Natural Resources; Mr. Wayne Berg, General Manager with Lincolnberg Development Corporation Limited; and Mr. Allan Brooks, Executive Assistant with HUDAC Alberta Council. These gentlemen were certainly well qualified to provide factual subject matter and answer questions in this area of study.

The first study area of non-renewable resources subjects was an excellent presentation on the "Archeological Survey of Alberta." Archeological resources are certainly non-renewable, so it was gratifying to hear of the excellent work now being done by the Archeological Survey of Alberta.

Dr. W.J. Byrne, Assistant Deputy Minister, Historical Resources Division, Alberta Culture, brought with him Drs. Paul Donahue and Don Wetherall, both of whom are with the Alberta Archeological Survey. These three gentlemen gave us an excellent presentation and answered numerous questions on this work.

The next study area involved five meetings, which provided an in-depth assessment of the serious problem of encroachment upon and removal of prime agricultural land from agricultural production. There is absolutely no question that productive capacity of soil is a vital public resource which must be recognized and protected or its productive capacity will be lost for all time, as was the productive capacity of the fertile Niagara Peninsula in Ontario. To deal with this subject, we heard excellent presentations from: Mrs. Peggy Thompson, Senior Research Officer with the Environment Council of Alberta; Dr. Fred Bentley, McAllister Environmental Services; Mr. Bill Shaw, Senior Planner with the Red Deer Regional Planning Commission; Dr. Phil Elder, Department of Environmental Design, University of Calgary; Mr. Les Miller from the County of Wheatland; Mr. Elmer Allen, Economist with Unifarm; Mr. Ivan Weleschuk, Service Director with Unifarm; Mr. Brian Peddegrew, Manager of Planning Section with Planning Services, Municipal Affairs; and Mr. Lawrence Kluthe, Alberta Planning Board.

To sum up this study, our executive secretary arranged for a showing of the film *Our Disappearing Land*. As this problem is politically sensitive, involving many social jurisdictions, we made a special effort to obtain the viewpoints of informed speakers with many years of experience in each jurisdiction. Our two resolutions reflect the essence of our conclusion from this study. Any long-range assessment of the value of this resource demands responsible action now, before it is too late.

Last year, Mr. Bill Ross of Esso Resources gave us an excellent presentation on the Cold Lake development. It seemed advisable to obtain the judgment of the Cold Lake Advisory Committee on the social and environmental impacts of the Cold Lake development.

Mr. Don Appleby, Manager of the Cold Lake Community Advisory Committee, gave us an excellent report of the local concerns. It was interesting to note that Mr. Appleby's remarks were generally complimentary towards the corporate citizenship of Esso Resources. The experience of "community/corporate co-operation" gained during the development can be invaluable for communities and corporations involved in future developments.

Our final meeting for 1981 will no doubt be a highlight for this year. The tremendous coal resources in Alberta foretell extensive development with resulting environmental impacts.

Due to the political sensitivities of the current acid rain problem, our Pollution Study Group will join us for this meeting on November 10th. I don't know how we could obtain more qualified speakers to deal with this timely topic, "The Environmental Impacts of Future Coal Development in Alberta." Our speakers are Mr. Neil Duncan, Senior Mining Engineer

with the Energy Resources Conservation Board; and Mr. Edward Brushett, Manager of Environment Protection with the Energy Resources Conservation Board; and Mr. Cam Edwards, Air Pollution Control, Environment Canada.

Two other officials, Mr. Al Schultz and Mr. Serge Dobko of Alberta Environment, will be present to answer questions regarding the department's responsibilities in this area.

I commend the educational value of this year's study program, and publicly thank the members of this study group for their dedication and interest in the work we have undertaken. I feel sure that the enthusiasm of our study group will assure another successful year in 1982.

Mr. A. Chris Dunkley

Chairman, Non-Renewable Resources Study Group

Members of the Non-Renewable Resources Study Group

Dr. J. Aitken*	Calgary Eco-Centre Society
Mr. W.D. Broughton	Oil Sands Environmental Study Group
Mr. G. Cameron	Edmonton Chamber of Commerce
Mr. G. Chronik+	Alberta Fish and Game Association
Mr. G. Dudley	Alberta Irrigation Projects Association
Mr. A.C. Dunkley	National and Provincial Parks Association, Calgary/Banff Chapter
Mr. H. Fauser	Alberta Fish and Game Association
Mr. C. Hansen*	University of Alberta - Students' Association
Mrs. E.S. Hunter	Consumers' Association of Canada
Dr. A. Lamb	Alberta Chamber of Commerce
Prof. A.R. Lucas	Law Society of Alberta
Mr. J.M. Martin*	Alberta Teachers' Association
Mrs. L. Moyer	Alberta Urban Municipalities Association
Mrs. B. Paschen	Unaffiliated
Mr. G.F. Paschen	Archaeological Society of Alberta
Mr. J. Prostebby+	Electric Utility Planning Council
Dr. J. Rapson-McGugan+*	Calgary Eco-Centre Society
Mr. G. Stewart	Canadian Petroleum Association
Mr. B. Stuart*	Alberta Federation of Labour
Mr. K. Warren	Electric Utility Planning Council

* No longer on study group

+ Attended study group as alternate

Members of the Energy Conservation Study Group

Mr. G. Cameron	Edmonton Chamber of Commerce
Mrs. J. Finlay	Outdoors Unlittered
Dr. W. Fuller	Unaffiliated
Ms. Jean Funk	YWCA
Dr. F. Kozar	Grant MacEwan Community College
Mr. H. Johnson*	Lethbridge Community College
Mr. R. MacKenzie*	Alberta Pharmaceutical Association
Mr. I.D.F. Shaw	Unaffiliated
Mr. J.E. Staples	Association of Professional Engineers

* No longer on study group

ANNUAL REPORT OF THE POLLUTION STUDY GROUP

Report from the Chairman - Mr. Lubomir Wojtiw

The Pollution Study Group held 10 meetings in 1981. One was a joint meeting with the Non-Renewable Resources Study Group on sulphur emissions from coal. Two meetings were tour meetings: one was a trip to the Pincher Creek area to examine the air pollution issue, and the other was a trip to the offices of the Hazardous Waste Management Committee to discuss their efforts and progress in selecting sites for disposal and storage of hazardous wastes. Other important subjects addressed by our group included: noise pollution, recycling, sulphur recovery, land application of sewage effluent, regional sewage systems, and water quality in Alberta rivers. A list of meetings, topics, and speakers is included at the end of this report, as well as a list of the members of this study group.

The meetings were very well attended by the members, and because of their dedication and enthusiasm, 1981 has been a successful and productive year for us. Most meetings were represented well by the news media, which generated excellent public exposure for topics addressed by the group. The group was successful in convincing the provincial government to use the TAGA unit to monitor air pollutants in the Pincher Creek area. A report of the results will be forwarded to the Pollution Study Group when available. Our study group also discussed and presented six resolutions in 1981; these were on such topics as: utilization of sewage effluent, air pollution, coal emissions, flaring from sulphur extraction gas plants, private sewage disposal systems, and recycling of paper products. In addition, a brief was presented to the noise pollution hearings by Mr. K. Blom, a member of this study group, and this brief was well received.

This study group had two vice-chairmen in 1981: Mr. D.A. Gemmill assisted in conducting the tour to Pincher Creek, while Mr. K. Blom represented the group on noise pollution. This arrangement gave the group greater versatility to address other pollution topics while keeping in touch with noise pollution. I would like to thank the two vice-chairmen, the members of this study group, the ECA staff (in particular, Ms. Betty Meier), and the news media, for their support and assistance in making 1981 a very successful and rewarding year for me and the Pollution Study Group.

Lubomir Wojtiw
Chairman, Pollution Study Group

Pollution Study Group Meetings In 1981

<i>Date</i>	<i>Topic</i>	<i>Guest Speakers</i>
January 26	Outdoors Unlittered Pollution Program	Ms. J. Finlay
February 22 and 23	Visit to Pincher Creek and Panel Discussions	Mrs. W. Carpentier Mrs. J. Hedenstrom Mr. J. Lack Mr. A. Schultz Mr. D. Onuczko Mr. K. Dickie Mr. A. Mathis Dr. M. Corriveau
March 30	Business Meeting	
April 27	Regional Sewage Systems and Lagoon Sites	Mr. M. Ellis Mr. P. Lang Mr. S. McClure
May 25	Visit and Meeting with Hazardous Waste Management Committee	
June 29	The Realities of Recycling - Where Do We Stand Now	Mr. J. Richards Mr. T. Rogers Mr. K. Simpson
August 31	Private Sewage Disposal Systems	Mr. J. Shaw Mr. G. Whiteford Mr. G. Foy

September 28	A Further Look at the Pincher Creek Issue	Dr. E. McCoy Mr. W. Geddes
October 26	Water Quality of the Bow, North Saskatchewan, Oldman, and Red Deer Rivers	Mr. J. Bell Mr. H. Hamilton
November 10	Environmental Impacts of the Future Development of Coal	Mr. N. Duncan Mr. E. Brushett Mr. C. Edwards Mr. S. Dobko Mr. A. Schultz

Members of the Pollution Study Group

Mr. K. Blom	Alberta Public Health Association
Mrs. P. Campbell	University Women's Club of Edmonton, Canadian Federation of University Women
Dr. M. Chaudhry	Lakeland College
Mr. M. Despins	University of Lethbridge - Students' Association
Mr. D.A. Gemmill	Calgary Section of Chemical Institute of Canada
Mr. G.H. Hare*	SAIT
Mr. K. Hodgins	Alberta Medical Association
Mr. B. Hollingshead	Alberta Roadbuilders Association
Mr. W. Irwin	Canadian Institute of Public Health Inspectors (Alberta Branch)
Ms. T. Kaleta*	Lethbridge Community College - Students' Association
Dr. M. Kostuch	Alberta Veterinary Medical Association
Mr. N. Kvisle*	Alberta Fish and Game Association
Mr. B. Langdale*	United Grain Growers
Mrs. D. Lewoniuk	Alberta Lung Association
Ms. D. McColl	Lethbridge Community College - Students' Association
Dr. M. Muc	City of Camrose
Mr. S.E. Robinson*	Mount Royal College - Students' Association
Mr. R. Romanetz	City of Drumheller
Mr. W. Ross	Unaffiliated
Mr. C. Scott*	Mount Royal College - Students' Association
Mrs. L. Scraba	Women of Unifarm
Dr. R.K. Shaw	Medicine Hat College
Mr. J. Shemanchuk	Entomological Society of Alberta
Mr. D. Smith	Northwest Region - Canada Jaycees
Mrs. S. Sunley	Alberta School Trustees Association
Mr. L. Wojtiw	Canadian Meteorological and Oceanographic Society

* No longer on study group

ANNUAL REPORT OF THE RENEWABLE RESOURCES STUDY GROUP

Report from the Chairman - Mr. Andy Wierenga

The Renewable Resources Study Group held a total of nine meetings during 1981, one of which was a field trip to the Dickson Dam, presently under construction.

I was elected chairman at our meeting of January 23rd, and Mr. Doug Patching was elected vice-chairman.

The study group has considered many issues during the year. One of our main concerns, pesticide applicator training, resulted in Resolution 14, "Pesticide Applicator Training Program;" Resolution 15, "Medical Examinations for Pesticide Applicators;" and Resolution 16, "Medical Services for Non-licensed Pesticide Applicators;" which will be brought to the Annual Joint Meeting for ratification. [Resolution 16 was not passed at the annual meeting.]

I would like to thank the members of the Renewable Resources Study Group for their excellent participation at our meetings, especially Mr. Ron Whistance-Smith and Dr. Charlie Wood, who very ably handled the chairmanship at meetings I was unable to attend.

Renewable Resources Study Group Meetings in 1981

The meetings held during 1981 were as follows:

<i>Date</i>	<i>Topic</i>	<i>Guest Speakers</i>
January 23	Trapper Compensation Program	Mr. Bob Stevenson
February 20	Alberta Application of Alternate Energy Alberta Application of Alternate Energy - Insulation	Mr. John Hughes Dr. Robert Gilpin
March 20	Fisheries Resources in the Province	Dr. Martin Paetz
April 24	Present Seismic Operations in the Green Zone	Mr. Doug R. Lyons
May 22	Roadside Vegetation Control in Alberta	Mr. Keith Price
July 3	Herbicides - Regulations and Enforcement	Mr. Tyrone Faechner Mr. Jim McKinley
August 21	Tour of the Dickson Dam Site	Mr. Brian Graham Mr. Ted Maduke
September 18	Solid Waste Management	Mr. Ken Simpson Mr. Don Smith

October 23 Impact on the Rivers of the Use of
 Increased Peaking Power from the
 Big Horn and Brazeau Dams

Mr. Bill Smith
 Mr. Dave Barton

I could not close this report without my sincere thanks to the ECA staff for their valued assistance in the activities of the study group.

Mr. Andy Wierenga
Chairman, Renewable Resources Study Group

Members of the Renewable Resources Study Group

Mr. N. Chymko	Canadian Society of Environmental Biologists (Alberta Chapter)
Mr. E.B. Cunningham	Lethbridge Community College
Mr. T. Donkersgoed	Unifarm
Mr. D. Dube	Canadian Institute of Forestry
Mr. W.J. Franci	Canadian Water Resources Association
Mr. E. Galloway	U.F.A. Co-op Limited
Mr. L. Halfe	Alberta Trappers' Central Association
Mr. R.A. Hill	Olds College
Mrs. C. Hooks	Alberta Association of Registered Nurses
Mr. W.L. Kergan	City of Lethbridge
Mr. E. Kure	Unaffiliated
Dr. R. Lane*	Canada West Foundation
Mr. J. Lickacz	Fairview College
Mr. N. Lorencz	Alberta Wheat Pool
Mr. D. Patching	Unaffiliated
Mr. J.R. Robison*	Alberta Trappers' Central Association
Mr. A. Rytz	Alberta Forest Products Association
Mr. T. Shewchuk	Grande Prairie Regional College
Mr. P. Thomas, P. Ag.	Alberta Institute of Agrologists
Mr. R. Whistance-Smith	University of Alberta
Mr. A. Wierenga	Christian Farmers Federation
Dr. J.C. Wood	Research Council of Alberta

* No longer on study group

ANNUAL REPORT OF THE URBAN ENVIRONMENT STUDY GROUP

Report from the Chairman - Mr. Steven E. Thompson

Dr. Lochan Bakshi was elected chairman at our first meeting held on January 30th, 1981, and Prof. Phil Elder agreed to serve as vice-chairman until July 1st, when he will be on sabbatical.

In August, Dr. Bakshi received the Lady Davis Visiting Professorship to Israel and it was with a mixture of regret and good wishes that the members said their goodbyes.

Prof. Hugh Knowles agreed to act as vice-chairman and chair the meetings until a new chairman could be elected.

At the meeting of September 24th, I was elected chairman and Mrs. Janis Kelman was elected vice-chairman.

Although the attendance of members has fluctuated from meeting to meeting, it has, on the average, been much better than last year, and the programs have been very interesting.

The January 30th meeting dealt with the downtown area redevelopment plan for Edmonton and Mr. Roger Hudson, Principal Planner, City Planning Department, was the guest speaker. As a result of this meeting, a letter was sent to Mr. Hudson, indicating the study group's support for the plan.

At this meeting, a vote of thanks was extended to Mr. Keith Driver for serving with distinction as chairman of the study group for the past three years.

On February 27th, we met with Mr. Mike Manett, Chairman of the Annexation Working Group, City of Edmonton Planning Department, to discuss long-term plans for the annexation area. This meeting was very well attended with several members of the press present as well as representatives from St. Albert and Strathcona.

The meeting of March 27th dealt with urban waste management and Mr. Gordon Thompson, Chief of Sanitation Engineering for the City of Edmonton, spoke to the study group on this topic.

Our April 30th meeting was held in Calgary and Dr. Don Detomasi, who was at that time Program Director, Urban and Regional Planning, Faculty of Environmental Design at the University of Calgary, provided us with an excellent presentation on the topic "Planning Problems in Resource Communities."

As a result of the Co-ordinating Committee identifying the problem of land use as a major topic for the year, the Urban Environment Study Group arranged a meeting to deal with the topic "The Relationship Between the Policy of the Alberta Housing Corporation and the Use of Prime Agricultural Land for Housing." Mr. Bud Fornasaro, Director of Land Appraisal, Alberta Housing Corporation, was the guest speaker on this occasion.

The meeting of June 26th dealt with the topic "An Approach to Urban Design for the City of Edmonton", and we were privileged to have Mr. Keith Driver provide us with an excellent slide-illustrated presentation.

The August 28th meeting featured the topic of "Wind Pressure Studies" with a most informative presentation by Dr. Anton Davies of Morrison, Hershfield, Theakson and Rowan Limited.

Our September meeting was held on the 24th at Mount Royal College, Calgary, on the topic "Comparison Between the Calgary and Edmonton LRT Systems." This meeting featured two speakers, Mr. John Hubble, LRT Planning Division, Transportation Department, City of Calgary, and Mr. Rod Heise, Transportation Systems Design Department, City of Edmonton. This was another meeting at which the members of the press were very well represented.

On Friday, October 30th, Mr. Cam Finlay, Director, John Janzen Nature Centre, spoke to the study group on the topic "Natural Environment in the City" and illustrated his talk with some excellent slides.

The meeting of November 27th will deal with the subject "Communications Technology and the Future Urban Environment." Our guest speaker will be Mr. Jim McDonald, Business Development Manager, Alberta Government Telephones.

On behalf of Dr. Bakshi, I would like to thank all the members for their support during the past year. I am looking forward to their continuing participation in 1982.

I would also like to express my appreciation for the continued support of the ECA, in particular, the members of the PAC Secretariat.

Mr. Steven E. Thompson
Chairman, Urban Environment Study Group

Members of the Urban Environment Study Group

Mrs. L. Bakker	City of St. Albert
Dr. L. Bakshi*	University of Athabasca
Mr. J.W. Clifford	City of Lloydminster
Mr. M.F. Colledge	Alberta Motor Association
Dr. S. Dalton	Concordia College
Mr. K. Driver	Alberta Association - Canadian Institute of Planners
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Dr. W.G. Evans*	University of Alberta
Mr. R. Hayter	City of Edmonton
Mrs. A. Hickman+	Alberta Motor Association
Mr. J. Hoskins*	City of Wetaskiwin
Mr. H.E. Impey	City of Grande Prairie
Mrs. J. Kelman	City of Calgary
Prof. R.H. Knowles	Alberta Association of Landscape Architects
Mrs. M. Lutz	Consumers' Association of Canada
Mr. K. Newman+	City of Edmonton
Mr. I. Taylor+	University of Athabasca
Mr. R. Thirnebeck*	Mount Royal College
Mr. S. Thompson	Mount Royal College
Mr. J. Van Eerde	City of Medicine Hat

* No longer on study group

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